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BLM Social Effects Project

Community Report:

Rangely, Colorado

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Prepared by:

Mountain West Research - North, Inc.

in association with Western Research Corporation

Prepared for:

BUREAU OF LAND MANAGEMENT

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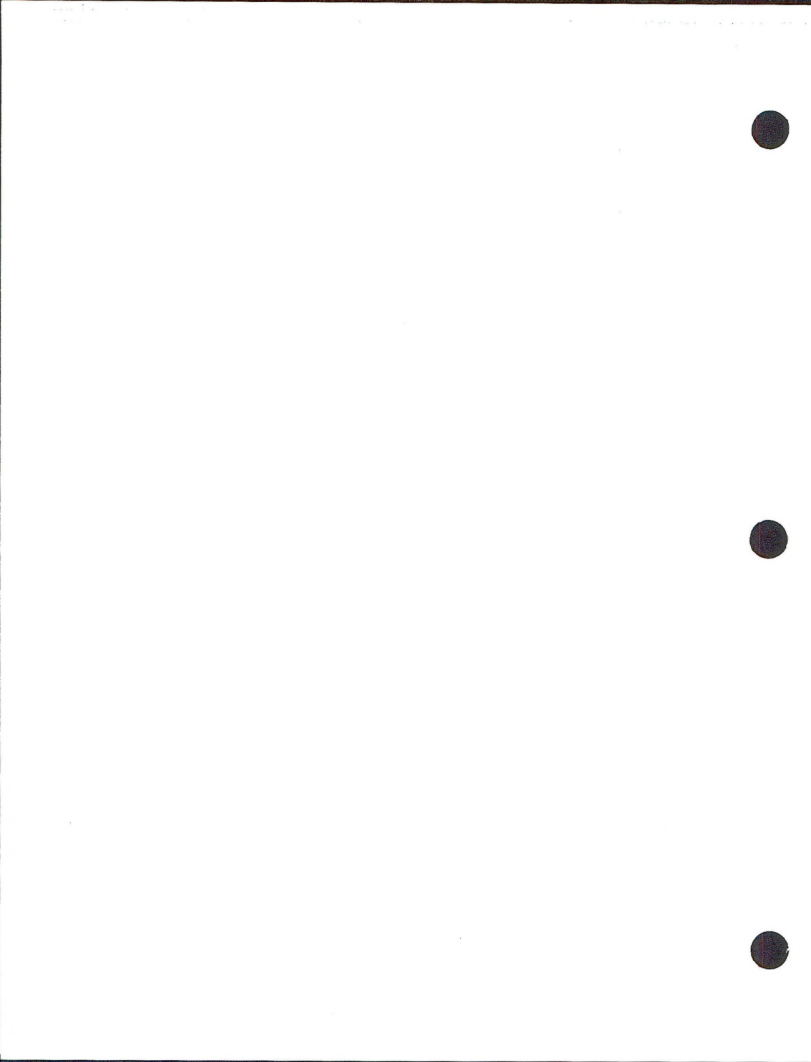
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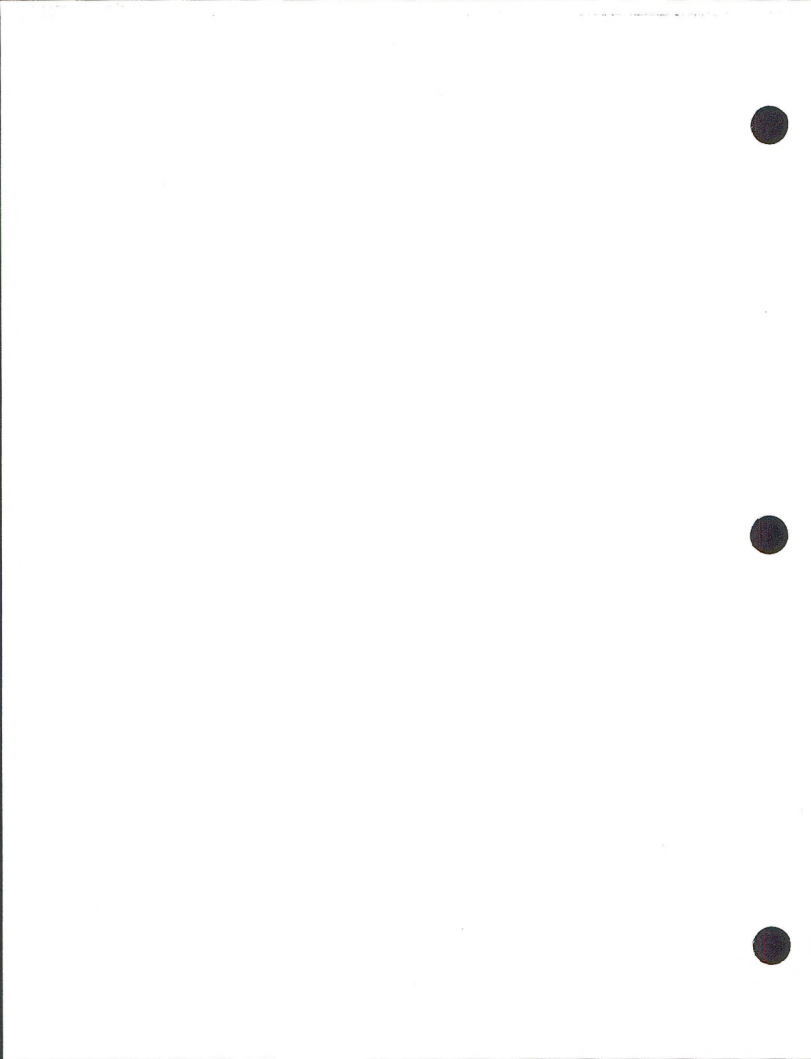
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Chapter I

Introduction

1.1 Background

This report on Rangely, Colorado is one in a series of ten community research working papers documenting the field research conducted as part of the BLM Social Effects Project. The project was designed to improve social assessment methods by conducting a literature review and primary research to develop and support a Guide to Social Assessment.

The project had five major components. The first component, a review of the literature, provided the basis for developing an analytic framework for the assessment of social effects of energy development. The literature review was organized into eight major subject areas which included the following:

- social organization
- political organization
- economic organization
- population and demography
- family
- specific groups, including Native Americans, women, and youth
- attitudes, values, and quality of life
- mitigation

The second component, the Social Effects Conference, was held in Denver in October, 1980. The conference brought representatives of state governments, the BLM, and the academic community together to determine what the focus of the project would be. A principal

objective was to integrate the perspectives of decision-makers and sociologists and develop a common set of assessment priorities.

The third component of the project, the research component, was based on the results of the literature analysis and the Social Effects Conference. The priorities identified for study centered on changes in community social organization and indicators of community well-being.

The fourth component of the project was the preparation of a social assessment guide. The Guide is the major product of the project; to ensure its applicability, it was given a trial application under actual field conditions.

The fifth component of the project was a public involvement effort to keep interest groups informed about the project. Meetings with BLM and state officials were held to brief them on the project and to solicit comments. A periodic bulletin was distributed to inform others about the project. In addition, training workshops for BLM social scientists were held to instruct them in the use of the Guide.

1.2 Purposes of the Research Effort

The research component was included in the project to achieve four major objectives:

- To identify social effects, including those suggested by the literature review and conference, and to verify them by field investigation.
- To test the analytic framework which was developed as a basis for the Guide.

- To further elucidate the mechanisms that cause social effects to occur in energy impact areas.
- To test field procedures and the conceptual approach at a level of effort comparable to that available to BLM staff conducting social assessments.

Although there were differences in emphasis among conference participants, seven priority assessment topics were identified as being of greatest concern. These were:

- 1) What is the distribution of socioeconomic effects among groups in impacted areas?
- 2) What determines the capacity of communities to manage growth?
- 3) What are the attitudes of residents, both old and new, toward development?
- 4) What are the effects on community facilities and services?
- 5) What are the major lifestyle and social organization changes resulting from energy development?
- 6) What are effective mitigation strategies?
- 7) How can cumulative social effects be measured or described?

Conference participants also emphasized that BLM needed an assessment method that could handle site-specific variations and that would be compatible with the multi-phase BLM assessment and planning processes.

The research phase was to last nine months and financial resources were limited. Clearly, the research effort could not do justice to all seven of the research priorities summarized above, and it was not the intention of BLM that the research effort provide definitive answers to all social impact questions. The goal was to devise an analytic framework that would produce effective social

assessments given the BLM process and, at the same time, to learn as much about the above areas of concern as the limited resources permitted. Thus, the project team was given the seven research priorities and was asked to create an appropriate analytic framework and method for implementing the research effort.

1.3 The Analytic Framework

Several general criteria guided the development of the analytic framework. The first criterion was to be sure that the subject of the research was clearly social in nature. The BLM believed that enough was known about how to do economic and demographic assessments as well as facilities and services assessments, but that social assessments needed improvement.

Second, if possible, BLM wanted the assessment process to discriminate between social effects that could be mitigated and those that probably could not. Before BLM or state and local entities can require mitigation, the effects must be known and feasible mitigation methods must be understood.

Third, the framework needed to be implementable within a variety of resource constraints. Each assessment effort within BLM has different constraints of time, personnel and funding. Thus, the framework needed to be workable under a variety of conditions.

A final criterion was that the framework should not only enable the forecasting of effects, but also should allow for determining the significance of effects for various populations, i.e., a basis was needed to determine the meaning of social effects.

In response to these criteria, an analytic framework was developed that is based upon the concept of social organization. As used in this project, social organization is a community level concept and is discussed in detail by Wilkinson in the Literature Review (Thompson and Branch, 1981). Basically, it focuses on the social structures and processes of community social organization as the most critical social characteristics potentially affected by energy development.

For general applicability, the four processes of social organization are differentiation, extra-local linkages, stratification, and integration. These are the broad social science labels used to describe these processes. But for purposes of this report, names of the processes have been restricted to those elements of the process which appeared to be of the greatest importance for western energy assessments. These terminology changes have been made in keeping with our intent to make this research report a companion to the Social Effects Guide:

- diversity/complexity (differentiation)
- outside linkages (extra-local linkages)
- distribution of resources/power (stratification)
- coordination/cooperation (integration)

The analytic framework posits that change in the fundamental processes of social organization - complexity/diversity, outside linkages, distribution of resources/power, and coordination and cooperation - are among the most influential social effects of energy development. With the processes of social organization as a central

focus and the desire to forecast social change caused by energy development as the principal objective, the conceptual model shown in Figure 1-1 was developed as the framework which could be used to construct the BLM social assessment guide.

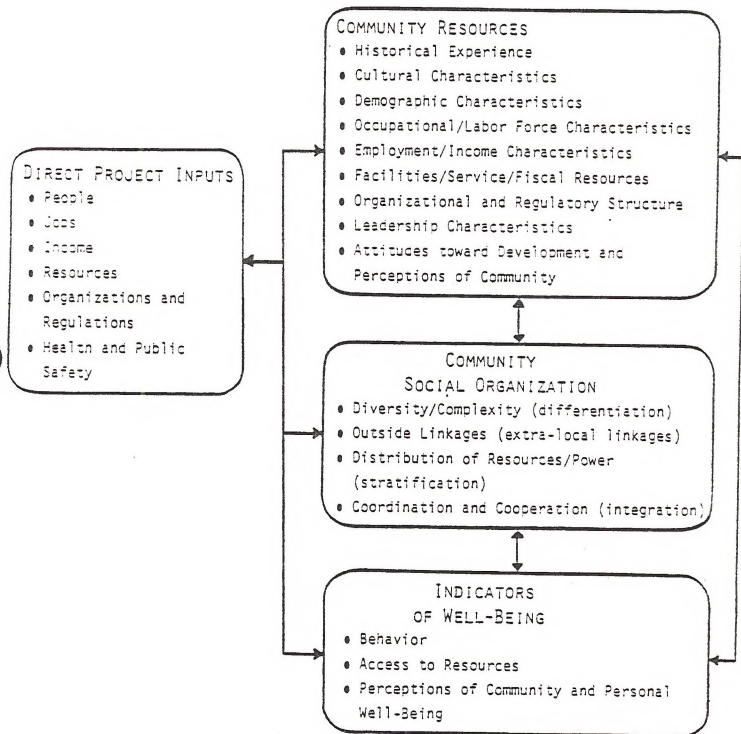
The model, Figure 1-1, has four major components: direct project inputs (projects, leasing decisions, resource management plans), the community's resources, its social organization, and the well-being of individuals in the community and their perception of the community. The normative goal of social assessment is to estimate the effects of exogenous inputs on the well-being of individuals. This involves analysis of the effect of the inputs on the resources available in a community, on the social organization of the community, and finally on the well-being of individuals in the community. It thus specifies the community as an important unit of analysis for the assessment of large-scale projects.

Based on the literature review and the BLM conference results, these four components were thought to incorporate the significant dimensions of social impact assessment. When combined with a theoretical concept of social well-being that addresses the role of the community in serving the social needs of its members, it provides a basis for examining not only the effect of the project upon social organization but also for examining the relationship between social organization and individual well-being.

A principal advantage of the model (Figure 1-1) is that it clarifies the relationship between the social assessment component and the other components of the total assessment process (e.g.,

Figure 1-1

Social Organization Model



economic/demographic, facilities and services, and natural environment). It also makes more explicit the mechanisms by which exogenous inputs modify community resources and social organization, and ultimately, individual well-being -- directly by the primary effect of the inputs, and indirectly by changing interaction patterns among the components.

1.4 Research Design

The research effort consisted of conducting ten comparative community case studies. These were imperative since little secondary data exists for the social variables specified in the model. Further, since the social organization variables have received little attention in western social impact research there was little known about them. Consequently, the case study effort was divided into two phases. The first phase was exploratory in nature and included four communities. More time and effort was allocated to these communities to determine the utility of the model, and to identify major relationships and variables. In the second phase, six more communities were included, but the effort was more focused and fewer resources were expended per community.

As stated above, the analytic framework devised to guide the research, Figure 1-1, dictates that the "community" be included as a unit when assessing the social effects of large-scale projects. This approach suggests that the social meaning of development for members of a social unit, the community, is determined largely by the

interaction of exogenous inputs with the community's resources and its social organization.

Using this approach meant the focus of the research had to be the community itself. It was decided the focus had to be further restricted to rural communities, those with less than 25,000 people. This was important because many of the problems facing BLM are concerned with disruption in rural, western towns. Further, the data had to be mostly primary data collected by the research team in the field, and it was important that the results be as easily generalized as possible. Since in-depth studies of only a few cases could produce misleading results, it was important to include as many cases as possible. Eventually, ten case communities were selected.

To obtain data needed for the four components of the model, two main data sources were identified: unstructured interviews and secondary data available only at the state or local level. The secondary data collected locally were mostly for the inputs and community resource components, and for rates of behaviors. Unstructured interviewing was used for data on social organization processes and the other two major indicators of well-being -- access to resources and perceptions of the community.

Field research teams of two each were used, with ten members of the project team participating. Of these ten members, nine had considerable experience interviewing in energy impacted towns, and rotation of team members among teams was used to minimize interviewer bias. Field instruments and procedures were developed and pretested

by a three-person team before research on the ten communities was initiated.

1.5 Selection of Study Communities

A purposeful sampling of communities in the six-state study region based on the following criteria was decided to be the most effective sampling procedure.

These criteria were:

- 1) The community must have had input from a major energy project between the years 1965 and 1980;
- 2) The energy development impacting the community had to be a mine, a processing plant (or both), or a gas and oilfield development. Employment had to total at least 300 people, since this was approximately the minimum size of projects likely to result from the BLM leasing process. (Although a preference was shown for coal development, other energy activity qualified.);
- 3) The community had to be outside a metropolitan area;
- 4) The energy development had to be past the peak of the construction phase, and preferably, construction had been completed;
- 5) Because of the tremendous differences in legal and organizational structure between the six states, there had to be representation from each state -- preferably two communities from each state; and
- 6) If possible, one of the communities in each state was to be relatively large and one relatively small (compared to the range of community sizes in the six-state area).

The sample:

From the following list of all communities in the six-state region that met these criteria, the communities indicated with an asterisk were tentatively selected for primary field research. (See figure 1-2)

Figures 1-3 and 1-4 are regional maps of the United States which show the six states with the twelve communities selected for study.

Figure 1-2

<u>State</u>	<u>County</u>	<u>Town or Community</u>
Colorado	Delta	Cedaredge
		Delta
		Paonia
	Garfield	Carbondale
		Newcastle
		Rifle
	Gunnison	Crested Butte
		Gunnison
		Pitkin
	Jackson	Walden
Montana	Moffat	* Craig
	Rio Blanco	* Meeker
		* Rangely
	Routt	Hayden
	Rosebud	* Ashland
		Birney
		Busby
		Colstrip
		* Decker
		Forsyth
		Lame Deer
New Mexico	Colfax	Raton
	McKinley	Gallup
		Thoreau
	San Juan	Aztec
		* Blanco
		Bloomfield
		Farmington
		Shiprock
	Cibola (formerly Valencia)	* Grants

<u>State</u>	<u>County</u>	<u>Town or Community</u>
North Dakota	McLean	Garrison
		* Underwood
		Washburn
	Mercer	Beulah
		Hazen
Utah	Oliver	* Center
	Carbon	East Carbon
		* Helper
		Price
		Wellington
	Emery	Castle Dale
		Cleveland
		Emery
		Huntington
		Orangeville
Wyoming	Sevier	* Salina
	Campbell	Gillette
		Wright
	Carbon	Rawlins
		Sinclair
		Wolcott Junction
	Converse	* Douglas
		Glenrock
	Johnson	Buffalo
	Lincoln-Uinta	Evanston
		Kemmerer
	Platte	Glendo
		* Guernsey
		Wheatland
	Sheridan	Big Horn
		Dayton
		Ranchester
		Sheridan
		Story
	Sweetwater	Green River
		Rock Springs

Figure 1-3

REGIONAL MAP

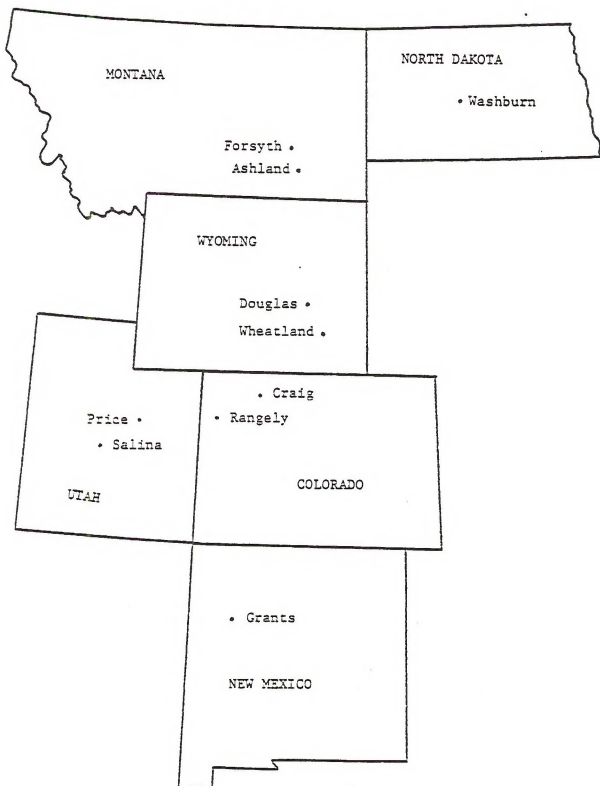


Figure 1-4

REGIONAL MAP

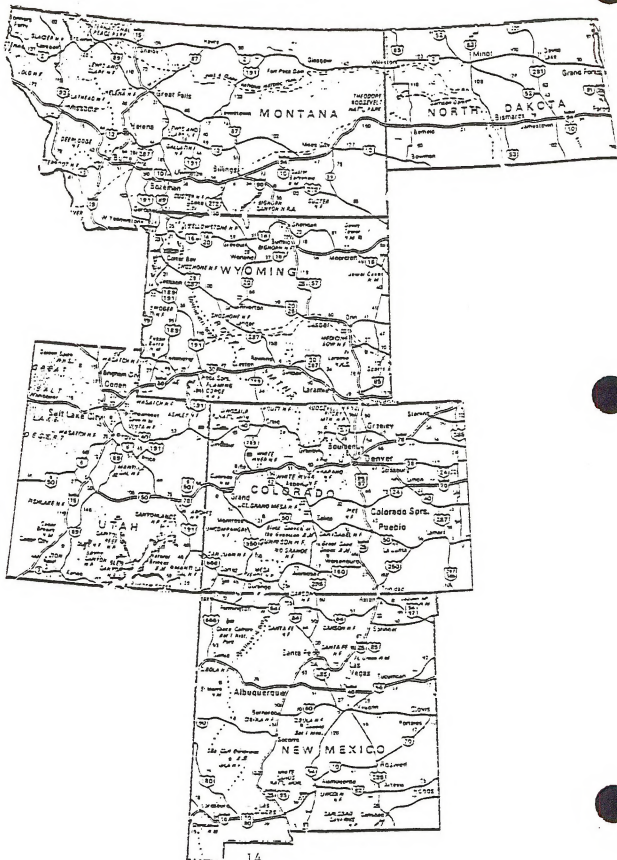


Figure 1-3 shows the location of the study communities, while Figure 1-4 is a more detailed map and includes highways and other cities and towns. Of the twelve communities selected, ten case studies were completed. Some secondary data were collected for Center, North Dakota and Bloomfield, New Mexico, but because of limitations of time and funding, interviews were not conducted for these two communities.

1.6 Field Procedures and Instruments

The field instruments used were semi-structured interview protocol forms which are included in Appendix A. In addition, the field team was given an outline which specified the structure of the community reports. However, because the research was partially exploratory, the structure of the reports was deliberately left flexible to accommodate unexpected observations and findings.

The emphasis in the research was to examine the applicability and veracity of the analytic framework and to determine whether these concepts were workable and effective within the research and data constraints of the assessment process. One of the real questions to be answered by the research was whether the social organization model was operational within Bureau Assessment Conditions.

Field procedures involved several general instructions. MWR and WRC prepared community information packages for each community when possible. This information was given to team members before they visited the community so they would have a knowledge base before they began to interview. Team members were encouraged to schedule the first two or three interviews before going to the community, but were

urged to let their interviews list develop as they worked in the community. For the first four communities, 10 to 16 man-days were allocated for field work; the remaining six communities were allocated 6 to 10 man-days.

The instruments were pretested in Gillette, Wyoming by three senior members of the team. Appropriate revisions were made and the instruments were then retested in Douglas, Wyoming, with another senior member of the team being substituted. This test was satisfactory and the revised instruments were used in the ten study communities. It needs to be stressed, however, that the instruments were not highly structured. Team members, for the most part, were highly experienced in field research and emphasis was placed on acquiring as much information as possible. This was an applied project, not a testing of a well-defined theory, and the emphasis was on increasing the information base.

Interviewers were requested to make detailed notes of interviews; the primary validity of the findings is based on concurrence of the team members. Of the ten field team participants, seven have a Ph.D. in sociology, five had worked on western social impact studies for at least five years, and four had worked in this area for over eight years.

1.7 Limitations and Concepts

Several limitations of the research and the report need to be noted.

First, because there was a high priority on applying the analytic framework to as wide a range of communities as possible, and an interest in utilizing techniques comparable to those that would be employed in the assessment process, the level of effort for research in each community was limited. This, combined with the focus of the research on delineating trends and evaluations of changes in community resources, social organization and social well-being, meant that less effort was expended verifying specific items of information than would have been the case in a more concentrated study of a single community. As a result, readers should be aware that some of the details about the communities may be in error -- for example, dates may not be precise.

Second, in order to rigorously examine the causal relationships between exogenous inputs and community response, the exogenous inputs need to be more clearly specified than this approach allowed. Ideally, an economic/demographic analysis would have been incorporated in the research. However, the specifications of the project and budget and time constraints did not allow a greater economic and demographic effort.

Third, the research reports were developed primarily as working papers to be used by the project team in developing the Summary Research Report and the Guide to Social Assessment. They have been prepared for release because it was felt that they provided valuable information on topics where research results are very scarce. Because of their genesis, the reports do not contain as extensive documentation or referencing as would have been included if they had

been prepared as final, stand alone documents, nor is the prose as polished as it might be.

Nevertheless, these limitations do not necessarily lessen the usefulness of the findings; rather they indicate areas where caution should be exercised in interpreting and applying the results.

1.8 Organization of the Report

This report is organized to correspond with the social organization model, with some accommodation to the need for orientation to the community early-on. The second chapter presents a brief summary of the history of the community and its resources. The third chapter describes the resource development activities in the vicinity of the community. Chapters four through seven discuss the changes that occurred in the social organization of the community as a result of the energy development in the following sequence: 1) differentiation (complexity/diversity), 2) stratification, 3) extra-local linkages, and 4) integration and personal interaction. Chapter Eight addresses the effects of the energy development on various indicators of well-being. Chapter Nine provides a brief overall summary.

Chapter II

Historical Analysis of the Community

2.1 Location of the Settlement

Rangely is located in Rio Blanco County in the northwestern region of the State of Colorado. Founded in 1889, Rio Blanco County is approximately 110 miles long and 40 miles wide and is bordered by Moffat and Routt counties to the north and east, Garfield County to the south and the State of Utah to the west.

The area became famous because of an Indian massacre where the Indian agent, Nathan C. Meeker, and nine Indian agency employees were killed by the Ute Indians. In response to the Meeker Massacre the Army moved into the area and set up an outpost at the site of the present day town of Meeker. In the year the county was formed, the Ute Indians were removed to the Uintah Reservation in Utah. The Army sold its buildings at auction and pulled out of the area leaving the town of Meeker as the county seat. Since its formation the county has been largely a cattle and sheep raising area. Meeker, in the eastern, mountainous part of the county, is the center for most agricultural activity. The town of Rangely, however, is located in the western part of the county where the terrain is more broken and arid and, hence, ranches are fewer and further apart than in the eastern portion of the country.

2.2 Economic Base of the Community

The primary economic sector for Rangely, as well as Rio Blanco

County, is mining activity, Table 2-1. The number of mining companies have been decreasing since 1970 but employment activity in mining has increased in the remaining companies. Specifically, the annual payroll in mining has continued to increase while the number of companies has decreased leading to a concentration or intensification of mining activity. Mining activity in Rio Blanco County accounted for 78.8 percent of the total payroll in the county in 1979 making mining the dominant industry in the county.

2.3 Previous Mineral and Energy Development (before 1965)

After World War II, the demand for petroleum products spurred oil exploration and development in the Rangely area. In the mid 1940's, Rangely became a "tent city" with people living in old army tents with wooden walls and floors. During this initial developmental period, Rangely's population expanded to its greatest size. It is estimated that the population of Rangely during this boom period may have been over 5,000 residents.

After the initial boom of exploration and drilling, demand for labor decreased and the town's population decreased accordingly. The population in Rangely has been increasing slowly, but steadily, since 1950. The area remains Colorado's largest oil producing center.

2.4 Relationship to Other Communities

There are only two towns in Rio Blanco County - Meeker (the county seat) and Rangely. Meeker has always been the center for agricultural activity in the county. Rangely was insignificant until

Table 2-1

Distribution of Annual Payroll (\$1,000) by Industry
in Rio Blanco County, 1970, 1974 through 1978

<u>Type of Business</u>	<u>1970</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Agricultural Services	1970	S	-		-	-	S
Mining	DATA	12,762	14,027	16,378	5,457	14,598	30,847
Contract Construction	IS	702	661	637	1,094	1,575	2,500
Manufacturing	NOT	145	250	207	168	229	279
Transportation, Public Utilities	COMPAR-	909	986	1,071	1,210	1,387	1,562
Wholesale Trade	ABLE	232	242	245	290	322	289
Retail Trade		878	1,044	1,138	1,183	1,651	1,841
Finance, Insurance Real Estate		263	327	347	420	519	721
Services		739	697	717	695	838	985
Non-Classified		31	33	28	11	68	S
Total		16,663	18,267	20,768	10,528	21,186	39,148

S = data suppressed because of small number of cases.

the discovery of oil in the area in the 1940's. With Rangely experiencing population growth, it has been able to establish itself on equal footing with Meeker in county politics. According to the advance count of the 1980 Census, Meeker had 2,356 residents and Rangely had 2,113. Current estimates place Rangely's population in excess of 2,600 residents. As shown in Table 2-2, Rangely has grown continuously since 1950, whereas Meeker's population has decreased and is now increasing again.

Representation through the county commissioners seems equally distributed within the county. Representation on the County Planning Commission is split, with three members from Meeker and two from Rangely. The fifth position is shifted back and forth between the towns.

Rio Blanco County appears to be divided into two distinct districts, the eastern and western portions of the county. The eastern portion of the county is dominated by Meeker and traditional agricultural interests. Rangely, on the other hand, dominates the western part of the county and is characterized by a lifestyle that is more oriented to energy-related development.

Rangely residents travel to Grand Junction (in the next county) and Vernal, Utah for many of the urban amenities. Shopping and entertainment are the two most commonly mentioned reasons for traveling to these towns. The trip in either direction takes an hour to an hour and a half and is used as much for a social activity as to acquire goods and services.

Table 2-2

Rangely and Rio Blanco County Population

Year	Rangely Population	Meeker Population	Rio Blanco County	
			Population	Percent Change from Previous Period
1950	808			
1960	1,464	1,655	5,150	81.2%
1970	1,591	1,597	4,842	-6.0
1980	2,113	2,356	6,255	29.2

Source: U.S. Department of Commerce, Bureau of the Census, Census of the Population, 1950, 1960, 1970, and 1980.

U.S. Department of Commerce, Bureau of the Census, Population Estimates and Projections, Current Population Reports, Series P-25, Number 780 (1971 to 1979).

2.5 Distinctive Ethnic and Cultural Characteristics

The ethnic composition of Rio Blanco County is overwhelmingly white. Of the specific ethnic categories reported in the Census, American Indian is the largest; however, the absolute numbers are quite small. The same is true for Rangely. Of the 2,113 residents in Rangely in 1980, 2,020 were White, 9 were Black, 21 were American Indians, 12 were Asian and Pacific Islanders and 51 were "Other". There have been no important shifts or changes in the ethnic composition of the area since 1889, when the Indians were removed to the reservation.

There are no outstanding cultural characteristics that indicate ethnic diversity in Rio Blanco County. Religious groups represented in the area include three different Baptist groups, Episcopal, LDS (Mormon), Seventh Day Adventist, as well as other protestant groups. The existence of three Baptist churches in town indicates the influence of people from the traditional oil producing states (such as in-migrants from Texas and Oklahoma) in the early days of the oil boom.

Ethnically and culturally Rangely and Rio Blanco County are very homogeneous. Because of this homogeneity, tolerance of diversity is probably not very high. In fact, there was some indication in local interviews of intolerance for ethnic and culturally different groups.

Chapter III

Chronology and Discussion of Major Events and Issues During Impact Period

3.1 Definition of Impact Period

Rangely, Colorado has been undergoing energy-related changes since the 1940's. The most recent surge of development has occurred in Rangely since the 1973 Arab oil embargo when national attention began to focus on development of domestic energy supplies. With its deposits of oil, gas, oil shale, and coal, Rangely became a significant energy-producing center for Colorado.

3.2 Chronology of Major Events, Issues and Actions

Since Rangely has been an oil town for most of its existence, major changes generally have been related to energy development. The first occurrence of major impact was related to the leasing of federal oil shale tracts. The Federal government leased two oil shale tracts in Colorado (tracts C-a and C-b), two tracts in Utah (U-a and U-b), and two tracts in Wyoming (W-a and W-b). Tracts C-a and C-b are located in Rio Blanco County halfway between the only two towns in the county, Meeker and Rangely. Tract C-a was leased by Rio Blanco Oil Shale Company which is a partnership of Gulf and Standard Oil of Indiana. Tract C-b was leased by Cathedral Bluffs Oil Shale Company which is a joint venture by Occidental Petroleum and Tenneco Inc. These two Colorado oil shale tracts are located in the Piceance Basin which is bordered by Rifle, Parachute, Meeker, and Rangely. The C-a

tract is nearest Rangely (27 miles) but currently there is no direct route to the site. One must drive approximately half way to Meeker before turning down the only paved road that presently runs by both sites. A road was supposed to be built from Rangely to the C-a tract, but at present the fate of the C-a tract is unknown. The quantity of oil shale in tract C-a is much smaller than that in tract C-b and the Rio Blanco Oil Shale Co. has always been an experimental venture. Cathedral Bluffs (tract C-b) on the other hand, started out as experimental, but has plans to go into commercial production.

Overall the impact of oil shale development on Rangely, Colorado has been anticipatory rather than actual. Rangely has responded in anticipation of oil shale growth without experiencing the actual magnitude of growth expected. Expecting growth, the state formed an Oil Shale Trust Fund to help communities handle growth caused by oil shale development. The county formed a special task force to make recommendations to the state about how the money should be spent, and the eastern and western halves of the county have advisory groups to the task force.

One issue associated with tract C-a is the nature of corporate responsibility with regard to socioeconomic impacts. Local residents believe industry should be responsible for mitigating impacts attributable to a company's development. Rio Blanco Oil Shale has claimed special status locally because of their "experimental" approach. Thus, as other mitigation settlements are considered, the issue becomes, 'should experimental industrial developments be allowed special status that exempts them from mitigating socioeconomic impacts

in neighboring communities?' Additionally, are Oil Shale Trust Fund monies (derived from the state's share of the federal oil shale leases) sufficient to handle expected oil shale impact?

Another concern in Rangely is increased drilling in the Rangely oil field. Although several companies are drilling in this field, Chevron has taken over the management of the "oil patch" and is in charge of having wells "serviced" as well as having new holes "punched". Since Chevron contracts out all drilling activities, two types of drilling rigs are commonly seen in the area -- service rigs and drilling rigs.

Increased demand for oil and the deregulation of oil prices has resulted in increased activity in the "oil patch". Chevron plans on drilling 60 new wells this year. Much of the activity with service rigs is to increase production from wells already in existence. Chevron's increased activity has created "indirectly" an increased need for oil field workers. This need has been created "indirectly" because Chevron only contracts for a drilling rig. The owner of the rig then contracts only with the drillers, and the drillers are responsible for hiring their own oil field workers. The resulting increased demand for oil field workers has created an "issue" in Rangely -- how to provide for the transient oil field workers?

This issue is related to drilling activity in general, not just Chevron. Other companies are drilling in the area for both oil and gas and the increased demand for labor is cumulative. It was estimated by a Chevron official that in terms of manpower the gas drilling south of Rangely (toward Grand Junction) was at least

equivalent to Chevron's activity in the area. Increased drilling of oil and gas wells has made pipeline construction necessary. Thus, the increased need for manual pipeline labor is added to the need for oil field labor. A sub-issue related to transient labor is whether Rangely residents want to accommodate this type of labor, and if so, at what costs to the local community.

This issue of providing for the needs of transient laborers was highlighted by a recent event in Rangely. A transient type worker climbed on top of the post office with a rifle, wounded two police officers, and was subsequently shot and killed by a local law enforcement officer. While the specifics of the case are not particularly important, the incident brought attention to the problem of transient workers not having their basic needs met by the town, and the resulting frustration experienced by the workers. Very little has been done to alleviate the housing shortage. Mobile home spaces are automatically leased to Western Fuels (the company developing the Deserado Mine) for their employees when they become vacant, motels and hotels are usually fully booked, and rental housing is often unavailable. When rental housing does become available, excessively high rent and biases against single males are frequently encountered. As a temporary solution, transient workers stay at the local campground until they can find better accommodations. However, the campground now costs \$150 per month and there is a two week limit on staying there. As a result of this lack of adequate accommodations, the transient population is angry and frustrated. The incident described may have been a manifestation of these feelings about local

conditions. In any case, the residents of Rangely will have to deal with this issue eventually.

A recent energy-related event in the Rangely area was the impact mitigation settlement with Deseret Generation and Transmission Cooperative pertaining to the Moon Lake Power Plant Project and associated Deserado Mine. Two major issues were involved. The first centered around the location of the power plant itself - would the power plant be located with the mine near Rangely or would the power plant be located separately across the border in Bonanza, Utah? The second issue was centered around a mitigation settlement with the company operating the mine.

Concerning the first issue, the governor of the state was opposed to power plants being located in the state, the mayor of Rangely was in favor of having only the coal mine, and the county commissioners wanted both the power plant and the coal mine. The issue, however, was settled permanently on economic grounds by Deseret.

The second issue became particularly important after Deseret decided to locate the power plant outside of Rio Blanco County. Local officials feared they would inherit the negative aspects of the project without receiving any increased taxes from the power plant.

A mitigation settlement was negotiated at the county level with the county commissioners and their attorneys reaching an agreement with Western Fuels (the company that will operate the mine). The mitigation package calls for expenditures by Western Fuels "totaling close to \$15 million". The settlement was necessary before Western Fuels could be issued the County's Special Use Permit. Specifically,

the settlement entails expenditures of \$1,515,000 to the town of Rangely, \$876,000 to the Rangely Hospital District, \$820,400 to the Western Rio Blanco Recreation and Park District, \$120,000 to the Rangely Fire Protection District, \$105,000 to the Rangely Regional Library, and \$1,500,000 to Rio Blanco County. The mitigation agreement also calls for a deferred payment of \$3,375,000 to Rangely for expanding water and sewer facilities when necessary. The Western Fuels mitigation agreement further provides for annual payments of \$60,000 to the county and \$25,000 to Rangely for monitoring changes attributable to the development.

The most salient issue in Rangely centers around restricted control over land and the related tight housing market. Specifically, local land is controlled by two main groups; a small group of local landowners and the Bureau of Land Management (extra local). Since most of the land north and south of Rangely is BLM land, it has not been available for residential or commercial development. This has constricted the supply of land and allowed a few local land owners to acquire a near monopoly on land. Consequently these land owners are able to ask premium prices for land in or near the town (\$45,000 to \$70,000/acre). Local residents, developers, and others have generally been unwilling to develop land or build new housing at these prices. In dealing with this tight housing market at least partially caused by high land prices, the town of Rangely requested that BLM sell the town 107 acres of land for a residential housing development.

This request was the source of much debate and some conflict in the town of Rangely. Needless to say, most large landowners were not

in favor of such a solution to the tight housing problem. The statement that they "had paid taxes on their land all this time and now should be able to make an 'honest profit'" seemed to represent this group's attitude about the proposed land purchase. The major portion of Rangely residents, however, felt the assessed valuation of the BLM land (\$5,000/acre) more clearly reflected the value of land around Rangely. These people were in favor of the town acquiring the BLM land for development.

BLM has approved the land sale and the town is now in the process of deciding how best to develop the land. Local opposition forces charge that some local politicians are likely to get rich in the process of development, and local government officials acknowledge that the potential for graft is very high. In spite of the potential problems, the town government seems determined to pass the land savings on to local residents who purchase housing in the new development. The Bureau of Land Management has indicated that the Bureau will consider continued sale of BLM land to Rangely to insure reasonable land prices and orderly development in the future.

3.3 Summary

In summary, almost all major events in Rangely have been related to energy development. The cumulative impact of this development has created two primary issues for Rangely: a shortage of affordable land which has led to a critical housing shortage, and the unmet needs of transient workers. Local residents seem to have reached consensus on

the land transaction with BLM; the town is working on alleviating the housing problem for a certain strata of people in the community.

There appears to be little awareness of the magnitude or seriousness of the second problem. One official indicated transients are unwanted and the town was not concerned with meeting their needs. The view was expressed that it would be best if these transients would live in surrounding areas so Rangely would not have to accommodate them. (They weren't the type of newcomers Rangely wanted.)

On the positive side, the town has discussed the possibility of acquiring BLM land for putting in temporary mobile home pads for these newcomers. At the time of this report no formal approach to solving this problem has been taken.

Chapter IV

Changes in Differentiation

4.1 Introduction

Differentiation is a measure of the complexity and diversity of a given system. In social systems (communities for instance) differentiation refers to the number of positions or groups in the community. Generally, as development takes place, communities become increasingly differentiated or diversified. Specifically, new groups with new roles are created to meet new needs and wants. The increased diversity of people moving into a community can be responsible for new needs and wants thus stimulating differentiation. The needs brought on by larger and denser populations can also stimulate such differentiation. Technological innovations and increasingly sophisticated technological systems can increase the need for structural differentiation. Although not well-documented, it is possible that expectations of change in respect to population can stimulate differentiation in communities.

Rangely has experienced increased differentiation since 1970. This increased differentiation seems as though it was as much the product of this expectation of increased population growth as it was actual population growth. The expectation of increased population growth was created in the early 1970's with the federal leasing of oil shale deposits in the Piceance Basin. From the time these sites were leased, Rangely, and more generally, Rio Blanco County, has been expecting significant increases in population. Thus the county and

the towns in the county have been "gearing up" to handle the growth expected to accompany oil shale development. This has meant increased differentiation particularly in political and economic areas.

Although the generalized increase in oil and gas drilling has had an effect on increasing differentiation in the area, the Moon Lake Power Project is probably the most important recent development affecting differentiation. The power project with the associated coal mine (to be operated by Western Fuels) has already caused significant changes in Rio Blanco County and Rangely. These changes will be discussed in the following sections.

In general, Rio Blanco County and Rangely have been experiencing population growth due to a number of energy-related activities. This increased population growth, as well as the expected population growth, has led to increased structural differentiation in the political, economic and social spheres. Causal links between any particular development and the creation of new roles or groups are difficult to make. The cumulative and synergistic effects of various types of energy development (both actual and expected) has led to increased differentiation in Rio Blanco County and Rangely.

4.2 Political Differentiation

Political differentiation refers to the increasing complexity of political systems. This can occur at any level of government. In reference to Rangely, changes in political differentiation will be discussed at the county and town levels.

Rio Blanco County. Change through increasing differentiation is generally a slow gradual change building in a cumulative fashion on what already exists. Change in reference to Rio Blanco County has followed this pattern.

The county has added one position to the planning office, an impact task force and two advisory boards to the task force as indicated in Table 4-1. All of these are interrelated. The planning office position was designated as Director of Development and Impact Coordinator. This position is filled by the former county planner and a new person was hired in his position. The Director of Development heads the Special Impact Task Force. This Special Impact Task Force was brought into being to assist in distribution of the county's portion of the State of Colorado Oil Shale Trust Fund. Other than the director, the core group of the Impact Task Force is comprised of the county commissioners, the mayors of Rangely and Meeker and industry officials. The two advisory groups consist of residents from the eastern and western halves of the county. Ideally, these local advisory groups are sensitive to local needs and make recommendations to the core group about local needs. The core group then prioritizes these needs for distribution of funds. Presumably this increases the ability of the local communities and the county to adapt to changes brought on by increasing population pressures.

Town of Rangely. In reference to the Town of Rangely's government, evidence of increased differentiation can be found in the creation of a new administrative position, the anticipated addition of two more positions and the formation of a special taxing district.

Table 4-1

Change in the Community Political Structure and
Public Services in Rangely and Rio Blanco County, 1970 - 1980

Office/Service	Jurisdiction		and		Location		Change 1970-1980
	Local	1970 Non- local	where	Local	1980 Non- local	Year Est.	
Mayor	x (1)			x (1)		1940's	0
City Council	x (5)			x (5)		1940's	0
County Commission No.	x (3)			x (3)		1940's	0
Administrator	0			1		1977-78	1
Planner		1			1		0
Building In- spector	combined			1 combined			0
Public Health Nurse							
Social Services/ Welfare		x			x		0
Mental Health		x		x		1978	1
Substance Abuse	0			0		NA	0
Public Day Care	0			1		1979	1
Senior Citizens	0			1		1977-78	1
Job Service	1			1			0
Grantsman	0			0		NA	0
Hospital	1			1			0
Clinic	0			0		NA	0
Animal Control							
Volunteer Fire Department							
Professional Fire Dept.	0			0		NA	0
Sheriff's Dept. No.							
Police Dept. No.							
Task Force	0			1		1976-77	1
Joint Powers Board	0			0		NA	0
Housing Authority	0			0		NA	0
Library	1			1			0
Other (Director of Development)	0			1			1
Task Force Advisory Groups	0			2			2

Specifically, several years ago the position of full-time town administrator was formed. The running of the town became sufficiently difficult to make the position necessary. The town is also currently in the process of creating two new positions to help the town better deal with the increasing number of problems. One position is for a financial manager and the other is for a housing specialist. The need for these two positions arose with increased energy development activity in the area. The Moon Lake Power Project and associated mine have made a financial settlement with Rangely that makes the position of financial manager a necessary one. The present housing shortage and the anticipated housing problems in town make the position of housing specialist a necessity. Although work is just beginning on construction of the mine, the amount of time and resources expended on the mitigation settlement, as well as the need for managing impact monies (both Moon Lake mitigation money for the mine and Oil Shale Trust Fund money), indicates a need for an increasingly professional and full-time staff at the municipal level.

The creation of a special recreation district and associated new positions also indicate increased differentiation in Rangely. The special district (comprised of the western half of Rio Blanco County) funds the new Recreation Center and its activities. The recreation center has a director plus a supervisor and a number of employees. The creation of a new taxing district with the associated new position also indicates increased differentiation.

4.3 Economic Differentiation

Economic differentiation can be discussed in terms of increased differentiation in employment and in terms of businesses. Changes in these two can lead to changes in the type of personnel employed which can increase diversity.

4.3.1 Employment

Differentiation in terms of employment in Rio Blanco County and Rangely can be attributed to the oil shale industry and the Moon Lake Power Project and Deserado Mine. The oil shale industry operating in Rio Blanco County has increased the diversity of employment in the region. The local community college in Rangely in coordination with other junior colleges in the region have started training students in oil shale technology to better equip students and workers for such jobs.

The Moon Lake Power Project and Deserado Mine are only starting to affect the community. Coal mining in an oil and gas town will undoubtedly affect the diversity of employment. The junior college in Rangely has entered into agreement with Western Fuels (the company that will operate the mine) over courses on mine safety.

Many of the newcomers moving into Rangely from economically depressed areas are coming to work in the coal mine. Word of mouth advertising, as well as mass media coverage of the mine and power plant, are responsible for much of the influx of newcomers Rangely is experiencing. The construction on the mine is just beginning and the mine will not be operational for two years. The construction company

responsible for building the road into the mine is currently hiring people for various construction jobs. It is anticipated that many of the construction workers will be able to shift to operating positions once the mine is opened. The peak construction work force is expected to be 425 employees with an operating work force of 400 full-time employees.

4.3.2 Businesses

Differentiation in terms of businesses has been slow compared to differentiation in other areas. There have been no new businesses of any consequence to open in Rangely or the surrounding area for several years.

4.4 Social Differentiation

Social differentiation refers to the process by which social systems become more complex. This process creates new roles and groups as a response to changing conditions in and around the social system. Although social differentiation, in the broadest sense, includes political and economic differentiation, in this section the term will be used only in reference to the purely social aspects of life.

In Rangely there is evidence of increased social differentiation coming from several areas. The first example of differentiation is the formation of a senior center in town. The senior center was donated space in the old elementary school building by the school district. Membership ranges from 40 in the summer to around 60 in the

winter months. Activities, transportation, and lunch are provided by the center. It is uncertain whether the senior center came about in response to increased population pressures and development or if it was a product of a peculiar age distribution. The age distribution is the product of rapid development in the 1940's when many of the present old-time residents of Rangely in-migrated. Residents that in-migrated during the 1940's and stayed in Rangely are now becoming senior citizens, thus making a senior center viable.

The second example of increased social differentiation is the formation of a Lions Club in town. The newly chartered club was formed primarily by a newcomer businessman in Rangely and has met with limited success. Traditional mechanisms of interaction among old-time businessmen could have made such a club unnecessary. The formation of such a club by a newcomer businessman could indicate that traditional mechanisms of interaction are unavailable to such newcomers, thus they seek alternative methods of interaction. At present, the club has dwindled to only a few active members. The Lions Club in Rangely is probably best viewed as an attempt to provide an alternative mechanism of interaction and integration through voluntary association. The reasons for the clubs limited success are open to speculation.

The third example of social differentiation in Rangely is the formation of the coalition of churches. A loose coalition of churches has been formed to deal with problems brought on by rapid population growth. Although little is known about the coalition by the research team, its creation represents an attempt to deal with the changing social environment.

4.5 Relationship of Change to Energy Development

Energy development has dominated Rangely since the 1940's. Increased political differentiation in Rangely and Rio Blanco County has been in response to energy-related development. Specifically, the creation of the new position in the planner's office (county) the Special Impact Task Force and the eastern and western advisory committees were all formed in relation to oil shale development. The increased political differentiation in Rangely does not have such a clear causal link. The influence of the Moon Lake Power Project and associated Deserado Mine is most probably affecting the town's efforts of creating two new positions (financial manager and housing specialist). Other indicators of increased differentiation, such as the town administrator position and the creation of the recreation district, are more the result of general increases in population due to the total cumulative effect of all development in the area.

Economic differentiation that has taken place in Rangely and the surrounding area has also been caused by energy development. The new technology required in oil shale development and the development of the Deserado Mine do and will require workers with different skills than those generally found in the area. Although there are a large number of unskilled laborer jobs utilized in both industries, there are a number of skilled and professional jobs that cannot be filled by local residents. The in-migration of skilled labor to fill these new positions will increase the diversity in Rangely.

Social differentiation is also related to energy development, although the causal link is less clear. The creation of the senior

center, formation of the Lions Club, and formation of the coalition of churches are most directly related to changes in the population that were brought on by energy development.

4.5.1 Ability of the Community to Manage Growth

Political differentiation brought on by energy development has increased the ability of the local governments to handle future growth. The increasingly complex situation locally made an increasingly professional staff at the municipal level necessary. Part-time lay people are no longer able to devote the necessary time nor do they have the background or training to deal with an increasingly complex system. The increasingly professional staff should improve the community's ability to adapt rapidly to a changing environment. A consistent remark in local interviews was that the local government was made up of "good people who were in over their heads". It was felt locally that professionally trained people were needed in town government to deal with the increasingly complex environment.

Economic differentiation has had the effect of diversifying the basic industry around Rangely. Although this diversification has not intensified to date, it has the tremendous potential for making Rangely a more attractive place to live. That is, such diversification will likely lead to increased goods and services in town.

The community's ability to respond has been affected in two ways. First, the community and the county have seized the opportunity to

control their share of the State of Colorado Oil Shale Trust Fund. The counties involved in oil shale development requested that the fund be turned over for local control and distribution. Rio Blanco County will be receiving approximately \$16 million through the trust fund. The Western Advisory Committee will represent local concerns for Rangely, as well as the mayor and the local county commissioners (as members of the task force).

The community has also increased its ability to respond by negotiating for a mitigation settlement with the company building the coal mine for the Moon Lake Power Project. The community negotiated a good settlement (as locally defined) to deal with the expected impacts of building a coal mine near town. This will undoubtedly increase the ability of the community to deal with future large scale energy developments.

Social differentiation has indicated that the community can respond to changing needs. The senior center and the coalition of churches show how the community can respond as conditions change.

One can only assume that the organizational skills that went into forming the above groups will be important in terms of future change. The ability of other members of the community to learn vicariously from the experience of other organizers and the organizational skills evidenced in the community should insure the community's ability to adapt in the future.

4.5.2 Distribution of Effects

The distribution of project effects should be looked at in terms

of the community as a whole and in terms of groups within the community. In relation to distribution of project effects to the community as a whole, the formation of the Special Impact Task Force has allowed for local control of oil shale monies. This increased local control was also exhibited during the mitigation process with the Moon Lake Power Project.

Increased political differentiation in Rangely has led to the ability of the community to handle growth. This was accomplished in part through the professionalization of the staff and utilization of professionals in dealing with development. Increased economic differentiation has meant more employment opportunities, better pay, and more diversity. Rangely has not, however, received as much oil shale growth as predicted or anticipated. The bulk of this growth has been concentrated in the Grand Valley from Rifle to Grand Junction. Social differentiation has been in response to changes in the population brought on by energy development.

The overall consequences of this increased differentiation will probably be more equitable use of municipal power among various groups, more and better paying jobs, and increased alternatives for social interaction/integration. At present there is evidence of the last two. There is no evidence, however, that increased differentiation has led to more equity in Rangely.

4.5.3 Summary of Major Effects of Differentiation Changes

Increasing political differentiation in Rangely and Rio Blanco

County has increased the community's ability to respond to change. The creation of the task force and two advisory committees seems to have contributed to local control over external change factors. The ability of local residents to form a special recreation district and build a recreation center also indicates increased local control. The increases in professional staff at the municipal level has also made town government more able to deal with change.

There is little indication, however, that the position of long-term residents has changed vis a vis the local power structure. It seems that old-timers still have ways of getting things done that are unavailable to newcomers. Usually this means by-passing the official channels, regulations, etc. Newcomers in town mentioned this specifically in relation to enforcement of zoning laws for mobile homes. Old-timers were able to place mobile homes in areas that were not zoned for mobile homes when newcomers could not. The hiring of newcomers in such positions as county building inspector/engineer could lead to more equitable treatment in the future. At present, however, there appears to be two systems operating; the official political system and the "good old boy system".

The effect of economic differentiation in Rangely has been to create new better paying jobs that have attracted newcomers to the area. These newcomers, many coming to work at the new mine that is under construction, add to the transient nature of a segment of the community. Some old-time residents feel that their town is being exploited by young laborers looking for a fast buck. Others want

newcomers with more stable jobs to become part of the Rangely community.

Old-time residents having been gearing up for tremendous, intense, large-scale oil shale development since the mid 1970's. Their expectations have not been realized. The talk of development without population growth has probably inhibited the community's ability to respond to rapid change. This is true especially in the private sector where wary investors need to see the proof of growth before investing private capital.

In terms of social differentiation, the formation of new voluntary associations has led to new alternatives for social interaction and integration for certain segments of the community. The process of organizing and forming new associations is probably an important one for future adaptation in the community. Undoubtedly, as the community grows, the need for new types of voluntary associations will be important for integrating newcomers into the community.

Chapter V

Stratification

5.1 Introduction

Stratification refers to the distribution of resources and power among groups in a particular social system. The distribution of resources in a rural, western community affects how a community reacts to energy development and, hence, how the development affects the well-being of community members.

The stratification system in Rangely, Colorado was identified as consisting of two major groups, with distinctive subgroups within each of these major groups. The first major group consists of permanent residents of the community both indigenous and newly arrived residents. The second group consists of the highly mobile, itinerant workers who are employed in the oil and gas fields in the area surrounding the community. Mineral extraction has been the dominant economic sector in the community and in western Rio Blanco County for over thirty years.

5.1.1 The Permanent Residents

The permanent residents are residents who have lived for a long period of time in the community or, though newly arrived, will remain for at least several years; this group can be analytically separated into six major subgroups. While it is recognized that any western community could be analyzed in several ways, for purposes of this analysis we believe the six subgroups identified here are the most

useful for understanding the effects of energy development on the local community. The six groups are:

1. wealthy families with recognized high social standing in the community;
2. land owners who control significant amounts of land within or adjacent to the town of Rangely and who are not included in the first group;
3. managers, entrepreneurs, and middle income employees;
4. managerial and supervisory employees of oil companies (particularly Chevron Oil Corporation);
5. wage and salary employees in the middle to lower income category; and
6. managerial and supervisory employees of coal and oil shale companies.

WEALTHY RESIDENTS

Wealthy residents of relatively high social standing consisted of only a few families in the Rangely community. We were able to identify only three to six families belonging to this category. The wealth of these families generally was derived from commercial/industrial activities. These families and individuals ranged from being exceptionally wealthy for communities of this size (i.e., two of the families were identified as having received \$15 to \$45 million each through the sale of a business in the past several years) to families who appeared to be reasonably wealthy.

In examining the relationship of these families to the general community, it appeared they are only marginally politically involved

(officially). Only one of them is an office holder. Apparently they remain aloof from a number of the more salient local issues resulting in conflict in the community. Some of these families enjoy a reputation for being benevolent and active supporters of the community and many of its voluntary social activities.

In general, people seemed to feel that these families are hard working members of the community and are, therefore, deserving of the wealth and social respect they had achieved. Furthermore, members of this group do not appear to use their positions or power in an abusive manner, and are supportive both financially and personally in community affairs which are of benefit to the community as a whole.

LAND CONTROLLING GROUP

The land controlling group in the community, both old and new residents, also consisted of only half a dozen families or perhaps even fewer. As described previously, three or four of these families appear to have had a quasi monopoly on land suitable for development for the past thirty to forty years, which appears to have repeatedly caused housing to be scarce and overpriced, forcing new residents to live outside the community.

There was a clear distinction between these families and the families of the first group, with almost no overlap between the two groups. The other groups in the community perceived the members of this group in a manner ranging from relatively neutral to explicitly hostile and disrespectful. One of these members was perceived in a particularly negative manner by a number of groups in the community. Numerous respondents described this family as being greedy and selfish

and almost never involved in activities that would benefit the community as a whole. Other groups were not as negative in their characterization, but few people evaluated any of the members of this group as being particularly valuable to the community.

Some members in this group are respected by other members of the community as being competent and successful business people. However, even their most supportive fellow citizens believed that all or most of them had been involved in conflicts of interest, which were probably illegal or at least not in the best interest of the community.

MANAGERIAL/ENTREPRENEURIAL/MIDDLE INCOME GROUP

The managerial/entrepreneurial/middle income group constitutes a large proportion of the permanent residents of the community. There appear to be no sharp divisions between the members of this group in terms of social status or position. There are some different religious identifications, particularly Mormons and Baptists, and there are some minor distinctions between white collar and blue collar employees, but viewed as a whole, the group is homogeneous. Members of this group express a great deal of satisfaction with the community and with their lives in the Rangely area.

They appear to be conscious of the shortcomings of the community, particularly the housing and business development problems related to the land monopoly issue. However, most of them feel it is a cooperative community where they enjoy living and have no desire to leave the area. Many members of this group have lived in the community for a considerable period of time and many of their children

had either returned to the community or probably would remain in the community following their educations.

MANAGERIAL AND SUPERVISORY EMPLOYEES

The managerial and supervisory employees of the major oil companies operating in the area, principally Chevron, are distinguishable as a group in the community primarily because many of them do not live in the town of Rangely. As a result of the land monopoly situation existing in the 1940's and 1950's, the oil companies built company towns a number of miles from Rangely. This has the specific effect of not only geographically isolating this group, but politically making them ineligible for any city offices. In fact, few of them participate in voluntary, social, or political organizations within the town of Rangely or even within the county. (The company housing outside of Rangely is being discontinued and these people are moving to town.)

Although we were not able to interview extensively with this group, our interviews did indicate that many of these people have been long-time, mobile employees of oil companies. Having worked in numerous other places in the world, their basic identification and loyalty is with their occupation rather than with the community. Consequently, it appears their views of the community range from neutrality and indifference to dislike or dissatisfaction with the town's lack of economic or social services. The majority of the members of this group will probably be transferred after some period of time or, if they happen to retire while in the job in this area, they usually move elsewhere to carry on their retirement.

LOWER INCOME EMPLOYEES

The lower income employees in Rangely who are not transient also expressed satisfaction with their life in the community. However, this group suffers a conspicuous disadvantage in the distribution of resources, particularly in the distribution of adequate housing. Because of the lack of land development in and around the town, there is a scarcity of low income housing such as mobile home parks, recreational vehicle parks, or multiple home units of desirable quality. Therefore, the relative cost of housing and related services appears to be disproportionately high for members of this group. We presume there is probably more dissatisfaction among this group than is reflected in our limited interviews, but it would take considerably longer in the community in order for us to better articulate the specific concerns of this group.

MANAGERIAL AND SUPERVISORY EMPLOYEES

A recently developed group in the community is the managerial and supervisory employees of coal and oil shale companies. We distinguish this group from the oil and gas group because it appears their relationship to the community is, and will continue to be, quite different. There are only two or three employees of Western Fuels Corporation located in Rangely at this time. Because of the permanent nature of a coal mine, the coal company is determined to develop reasonably priced housing in town so that the majority of their permanent employees, and eventually those of any oil shale company, will be able to locate in the town. They are likely to be active in voluntary and political organizations within the community. While

this group has had little effect on the community thus far, there is every indication they will have significant effects on the political, economic, and social stratification of the community in years to come.

The proposed coal mine will cause a large number of permanent employees to locate in the community; the high education level of this group and the higher incomes they receive will probably significantly alter the structure of the stratification system. Specifically, members of this group will be in a better position to nullify or rectify the effects of the land controlling group since they will have both personal and company inspired incentives to participate in the social and political organization of the town with the explicit goal of improving public services and private commercial activities within the community.

5.1.2 The Itinerant Workers

The second major group in the community consists of the itinerant oil and gas workers and employees of service companies related to the oil and gas rigs in the area. There are two major components of this group: employees of oil field service companies which provide a variety of services to the drilling activities, and the itinerant employees who work on the oil drilling rigs and on the installation and maintenance of oil and gas lines in the region.

Even though the employees of the oil field service businesses were highly visible during the day, especially at lunch time, most of them live in Vernal, Utah and were not present except during work hours. Consequently, we were unable to interview any members of this group.

The second group can be divided into two significantly different categories: the employees of the oil rigs and the employees of the pipeline construction companies. There is a particular stratification system of the oil rig employees which has important implications for this study. The structure of the oil rig employee system consists of a series of employer/employee relationships. While the oil leases are owned by oil companies, the companies do not own the rigs but, in fact, contract out the drilling of the wells to rig owners. In turn, rig operators and owners don't directly employ their own crews but put their rigs under the control of an individual known as the "tool pusher". The tool pusher does not directly employ a crew to run the rig but, rather, hires a driller. The driller, then, hires a drilling crew consisting of the following positions: derrick man, motor man, and worm.

There are important effects from this peculiar series of employer/employee relationships. First, it enables the major oil companies to disclaim any responsibility for people who own or work on the rigs, claiming they are not employees of the oil companies. In turn, rig owners disclaim responsibility for the people who operate their rigs, stating they only have one employee, the tool pusher. The tool pusher contracts with a driller and so he's only responsible for the driller. The driller is, in fact, the one responsible for hiring the rest of the rig crew, and they work for him.

The lack of corporate responsibility for the workers ensures the worker will be alienated from his work. Oil companies, since they are not responsible for oil field hands, make no provisions for the basic

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The lack of corporate responsibility for the workers ensures the worker will be alienated from his work. Oil companies, since they are not responsible for oil field hands, make no provisions for the basic

necessities of life for this group. Thus, when the managers of Chevron Oil are asked why they are not involved in assuring reasonably priced housing is available for the numerous oil and gas employees in the area, they, of course, disclaim any responsibility because the workers are not their employees. This denial of responsibility passes right on down the line to the level of the driller. It then becomes apparent that managerial control over the various levels of employment is also relinquished. For example, if for some reason the rig owner fires the tool pusher, the end result may be that the driller and his oil rig crew also are unemployed. Therefore, termination of any employer/employee relationship in this series may cause all employees at or below that level to loose their jobs. Thus, the lower members of this employment hierarchy, the rig crew members, can be working hard, performing well, and find themselves unemployed on a moment's notice for activities over which they have little or no control.

The net effect of this peculiar occupational stratification system is that the majority of the employees working on any particular rig are disenfranchised members of society in a crucial and important way. In our complex and highly organized society, access to and acquisition of basic resources needed to maintain a certain quality of life are assured by the individual's membership in an organizational and/or community structure. Thus, employees of a local coal company can be, and usually are, assured of some reasonable level and quality of housing because of the efforts of the coal company, the organization who both claims them and controls them. Other employees not associated with large organizations are also members of local

communities. They and the groups to which they belong participate in local political and social organizations through which the negotiation process for acquisition and maintenance of necessary resources is carried out.

In the case of itinerant oil rig workers, however, we have a situation where these individuals are neither a member of an occupational organization nor are they members of any local community because of their high mobility. Therefore, these individuals are poorly represented in the structures and processes which distribute resources and, as could be expected, they appear to be very significantly victimized. They are seldom provided basic resources such as housing, medical care, and education, or they are provided these resources only at an exorbitant price and in a highly unreliable and uncertain manner.

Conditions associated with the development of oil and gas play a major role in the situation of these itinerant workers. Specifically, oil and gas fields often consist of several major companies involved in exploration. These major companies may hire a multitude of rig owners or tool pushers to drill the wells. Thus the work force in a given field may be extremely atomized. Contributing to this atomization are the different production schedules of each company which may not coincide. Thus development of an oil field can take place in fits and starts, unsynchronized with other companies, incremental in impact, and uncoordinated with the local community. Coal development, power plants, construction, and oil shale development require specific construction schedules, build up of the

construction work force, and build up of an operational work force (all intricately interrelated). Such construction requires large numbers of skilled workers operating generally on a tight schedule.

Companies building large projects are often forced to provide mitigative measures (such as housing for workers) as conditions of permits or zoning changes. Such does not seem to be the case with drilling an oil or gas well. Thus the incremental approach to drilling appears to exclude companies from having to mitigate the impacts of a large work force.

Predictably, we found the members of this group to be highly disillusioned and angry. Thus, it was not surprising when the shooting occurred in Rangely, approximately ten days after our interview team left the town. (The shooting is described in Chapter Three.)

The stratification system of pipeline workers is somewhat different than that of oil rig workers. While we were unable to obtain a detailed description of this system during the limited time we had, we did confirm that the nature of pipeline construction work differs significantly from that of oil rigs, resulting in different behaviors by members of the two groups. Specifically, we were told by a number of local people that the behavior of pipeline construction workers was definitely less desirable than that of the oil field workers. Pipeline construction workers have a reputation in town for being more violent and abusive than oil field workers. One reason given for this difference was that pipeline workers were often away from home from two to six weeks working under undesirable conditions.

The problems associated with this type of erratic employment schedule can produce a tremendous strain on family and marital relationships, too often resulting in undesirable behavior patterns. The second reason was that many of these pipeline workers were members of the iron workers union and as such felt a responsibility to live up to the "macho" union stereotype.

It was apparent that both of these groups are in fact socially disenfranchised. The parent companies, i.e., oil and gas companies, are receiving the economic benefits of their labors while explicitly refusing to accept responsibility for them on the basis that they are not employees of the company. The high mobility of both groups deprives them of the opportunity to participate in the various organizational processes to negotiate for needed resources. It is clear that both groups, along with their families, are considerably disadvantaged because of their alienation from the organizational community.

Interviews with permanent residents confirmed that these two groups of itinerant workers are not accepted members of the community. Only after being pressed by the interviewers did residents realize that they, in fact, know almost nothing about these workers even though they physically occupy their community for a part of each year. It also became apparent, particularly in interviews with city officials, that there is no desire to provide resources, particularly housing, for these itinerant workers. Without adequate housing and other critical resources, this group of "undesirables" will be less likely to remain in the community after their present work is

completed. (At the same time, officials were worried that the tight land and housing situation might discourage wage employees from settling in Rangely, thus losing the growth potential to a neighboring community.)

It is evident that neither the local community nor major organizations claim these itinerant workers as members. This unique situation has a manifest negative effect on all of the groups involved -- the oil and gas companies, the local community, and the itinerant workers themselves. Given the amount of personal and social disorganization that appears to exist among the itinerant workers, it hardly seems plausible that the productivity of these workers could be cost efficient for the companies they work for. Further, it appears that many of the problems associated with energy development stem from the behavior of itinerant workers. These kinds of problems are likely to be identified by residents as the most undesirable aspect of development. The fact that the community participates in the process of disenfranchising this social group has to cause at least some of the social disorganization problems of these workers which the local community finds unacceptable.

Our interviews revealed that workers from other industrial sectors and geographical regions of the country are coming in considerable numbers to the oil and gas region seeking employment. These new recruits, who come from the timber industry in the northwest and the manufacturing industry in the midwest, have expectations of receiving adequate basic resources. They were members of an occupational organization and were permanent members of local

communities, with both relationships assisting them in obtaining basic resources. The anger, disillusionment, and frustration of the families we interviewed was quite apparent. They do not understand much about the local community, having only recently arrived, but they are certainly angry at what they perceive as the unjust and exploitive attitude, both of the local community and of the oil and gas companies.

5.2 Changes in Political Stratification

Access to political position in county government appears to be limited. Office holders tend to be at the top of the general stratification system -- male, Anglo and relatively wealthy. The most powerful county positions are Commissioners, Sheriff, County Attorney, County Assessor, County Treasurer, and County Clerk; all but the clerk fit the above description.

The fact that the commissioners are all male and particularly that they are all ranchers is an interesting pattern we see in most western counties. Commissioners represent all the people in a county, and the county controls and funds the majority of the most important services -- library, hospitals, roads, law enforcement (Sheriff), recreation districts, mental health, public health and sanitation, land use regulations, and others. Usually over 70 percent of the people in a western county live in towns and are not directly involved in agriculture. In Rangely, as elsewhere, it appears that politically managed resources at the county level are controlled by a very few and the distribution of these resources reflects the interests of these

controllers. This question of distribution is very complex in Rangely, however. The commissioners supported an excellent recreation district, a good hospital and library. But other areas appeared to be ignored, such as application of land use regulations, control of drilling activity and, indirectly, provision of services and housing for transient workers. But the allocation of resources was not highly skewed to any one group and the commissioners appear to be active in recent years in looking after the general public welfare, i.e., the special county development permit, the mitigation settlement, and the BLM land sale.

Political office holders in town government also appear to have been quite limited until the mid-1970's. The office of mayor was held for 10 to 15 years by three middle-aged, white males, all of whom were part of the land oligopoly in town, and all of whom had serious conflicts of interest.

In the last five years, however, there was considerable change in the overall profile of office holders. The new mayor is a female, apparently not involved in the land game. Two women were appointed to the Council, at least one of them a newcomer and a new businessman was also appointed, not involved in the land game. Thus, there is considerable evidence that city political positions have become open and more accessible.

In terms of the power and will of political action (see Section 3 of the BLM Literature Review), county office holders appear to have both the will and power to act. They have, however, not used either for the benefit of a few groups, most notably the transient workers.

Political will may or may not have been present prior to the mid-1970's, but clearly the imminent problems posed by energy development brought out the will of the commissioners and they created the power to act, i.e., the special county permit, the task force, and the informal alliance with state and federal officials to extract the mitigation settlement.

It is unclear whether the present city administration has either the will or power to protect the well-being of any or all of its constituents. The city has shown the will to accomplish some things (the BLM land trade), but they do not appear to be using their authority to enforce land use regulations or universal compliance with city codes and regulations. It is very unclear whether the city has the power to do much more than it already has. City government in most western communities, as in Rangely, has limited revenue generating ability, provides only a few of the basic services, and has very limited legal abilities. The power of the town of Rangely is very restricted by the power of the county and the state. This limited power of cities and towns may be a crucial variable for this study.

5.3 Changes in Economic Stratification

5.3.1 Changes in Distribution of Employment Opportunities and Income and Wages

There has been some fluctuation in the total number of employees in different sectors of the economy in Rio Blanco County. Employment in agriculture has dropped off slightly over the years and employment in manufacturing (which includes oil and gas employment) has increased

somewhat over time. While per-worker earnings have increased slightly in some sectors, such as manufacturing, these increases are not disproportionately great for any sector of the economy. Therefore, the stratification, or access to resources through employment and wages, has been changing slowly with energy development.

Basically, access to economic resources in the Rangely community is not highly differentiated (if one excludes the top two strata). As indicated in the introductory section to this chapter, there are two groups of wealthy families who are at the apex of the stratification system in the community. The wealth of these relatively few individuals has been tied to either inheritance of land or wealth or being employed in an industrial sector which experienced dramatic gains due to the oil and gas business. With this exception, the distribution of economic resources is not greatly different for the other groups in the community. Because the whole area has sparse economic resources, particularly compared to urban areas of this nation, income or economic wealth does not create significant differences between groups for the majority of the population.

5.3.2 Changes in Business Opportunities

To date, there appear to have been few business opportunities created by the limited growth that has occurred. Access to the business opportunities that do exist in the community do not appear to be highly differentiated with the exception of the control of land. The control of land and, hence, the control of business or development opportunities that require access to land has been limited to those

few individuals who had extreme wealth or had either inherited or acquired the land numerous years ago. However, possession of such land has not, as of yet, had a highly significant effect on the economic stratification system. Those few individuals or families who have large land holdings in the area do have considerable potential for raising their economic position in the community. To date, this has not happened and if the land monopoly is broken through the BLM land trade and other events primarily occurring because of the involvement of Western Fuels and other energy corporations, then this potential might never be realized. If land prices in the community were devalued to the appraised price of the BLM land (approximately \$5,000 per acre), the majority of the large land holders constituting the land oligopoly in the community would no longer be significantly economically better off than most other residents in the community. In fact, depending on the nature and type of any financing on these lands, a general devaluation of land in the area could result in some of them losing ground in their economic position relative to others in the community whose economic worth would not be diminished by the devaluation of land.

The one outstanding difference in access to economic resources in the community appeared to be determined by who had access to the limited funds of the one bank in town. Established and potential businesses in the community appear to be highly constrained by the limited amount and type of financing available through the local bank. As with most small, rural banks, it appears that the bank's resources are controlled by a few individuals and that those resources are made

available in a selective fashion to only a few people in the community. Thus, obtaining financing for a new business venture or participating in a business opportunity is highly dependent upon one's relationship to the local bank. For those people in the upper groups of the stratification system, i.e., those who enjoy industrially based wealth or who have large land holdings, this local banking limitation is probably not much of a constraint. Such individuals have enough collateral that they can probably obtain financing from banks outside the area if they are not able to obtain desired financing from the local bank. For the rest of the community, however, the local banking situation appears to be a highly restrictive factor in determining their ability to gain access to resources that are dependent upon a certain amount of financing. It is quite evident that differential access to local banking resources does create a very large differential in the ability of members of the community to acquire or demand other resources. Access to financing, along with the other major variable in this community, access to land, are the two prime determinants of access to almost all other resources that are not publicly provided.

5.4 Changes in Social Stratification

Prestige in occupation is primarily related to people employed and in an ownership position in agriculture and people employed in a managerial position for one of the large energy-related companies in the area. Length of residence and agricultural ownership and management are highly interrelated. The highest degree of prestige in

the community seemed to belong to those people that were old-time ranching families who had managed to acquire a significant amount of wealth. Differences in social prestige or status, however, did not appear to be great in the community except between the wealthy families and the rest of the community. As indicated in the introduction to this chapter, the social prestige accorded to members of the land-owning group in town was not particularly high for any of those members, and for some, it was lower than for the middle-class members of the community.

In all probability, the criteria for prestige and status will be most strongly affected as the permanent coal mining people and oil shale families move to town. As people with professional and technical training, i.e., engineers, chemists, physicists, and MBA's, move to town and establish permanent residence, more emphasis will probably be given to educational attainment and the skills achieved through such education. As the number of people in the community belonging to the coal and oil shale groups increases, then the emphasis on occupational prestige will also probably change considerably with much more of the status component of occupation going to professional occupations other than agriculture. Generally, it could be expected that the occupational prestige and the level of income of many of the new coal and oil shale managers will place them in the upper stratification level in the community. It remains to be seen, however, whether the emphasis upon length of residence will continue to be a strong criteria for admission to the highest stratification level and, hence, will continue to be a controlling

factor over local affairs and resources as has been the case in the past in Rangely and in most small western communities.

5.5 Relationship of Changes in Stratification to Energy Development

One conclusion from the above discussion is that the effects on the stratification system of oil and gas development as opposed to coal development will remain quite different. Oil and gas development, thus far, has simply added a group of managers and supervisors to the local stratification system, most of whom are neither involved with the local community nor act as a resource to the local community.

Developers, however, because of their more permanent nature and their direct accountability for their employees will affect the community stratification system considerably. Coal company employees will probably significantly reduce the power of the local land oligopoly. In fact, it appears that the coal companies may have had considerable influence with BLM in initiating the BLM land trade. The importance of this is that all groups in the stratification system, with the exception of the land controlling group, might benefit by the presence of the coal company in terms of access to resources.

It is important to understand how and why the BLM was influenced to engage in the recent land trades with the town of Rangely. There is some concern that this land trade could portend a dependent relationship between the local community and national organizations and/or federal agencies such as BLM. If the land trade was primarily the result of lobbying by the coal industry so they could develop

their resources in a more economic and efficient manner, then there is reason to be concerned that the local community may be losing control over its activities and resources to external, national level groups. Before this report is concluded, however, we should try to retrace the influences that were involved in the BLM land trade to ascertain the implications this may have for energy development effects on local communities.

5.5.1 Ability of the Community to Manage Growth

The potential shift in the stratification system from the people who own large amounts of land to those with industrial interests could help the community manage growth (in terms of obtaining land from the BLM and making housing more readily available). Also, the potential for increases in professional technical and managerial positions in the local government (increased professionalization) that has been brought on by population growth could help the town manage growth better.

Rangely's 40-year history with energy development has probably helped the community more than anything else in terms of managing growth. Busts and booms, rumors of tremendous growth and the uncertainty of new technology (such as oil shale) help long-term residents manage the present growth in the context of past growth.

One should be careful here not to confuse managing growth with managing development. The most likely situation is that the community is coping with growth which may or may not be developmental (i.e., in the communities best long-term interest).

5.5.2 Distribution of Effects

It appears that two strata are bearing a disproportional share of the costs of growth. Specifically, the old landed agricultural families appear to be in the process of losing power vis a vis the wealthy families involved in industrial activity. This seems to be taking place because the local economy has been shifting from agriculture to energy development. The process will undoubtedly be speeded up if the BLM land sale goes through.

The second group to pay a high cost consists of the itinerant workers. These transients provide the necessary manpower to keep the oil and gas field pumping and the pipelines in construction yet they do not have adequate housing. Living in conditions that are clearly unacceptable by most standards, these workers, in large part, have come from economically depressed areas where they were gainfully employed upstanding members of the community (often homeowners). To be forced into degrading living conditions in a community that they perceive as exploitive makes them angry.

Of course the long-term residents feel exploited also. These long-term residents feel as though the transients are just using the community as a way to make a fast buck. They feel the transients do not care about the community and have no commitment to the community. Thus these people also feel some of the costs of economic growth.

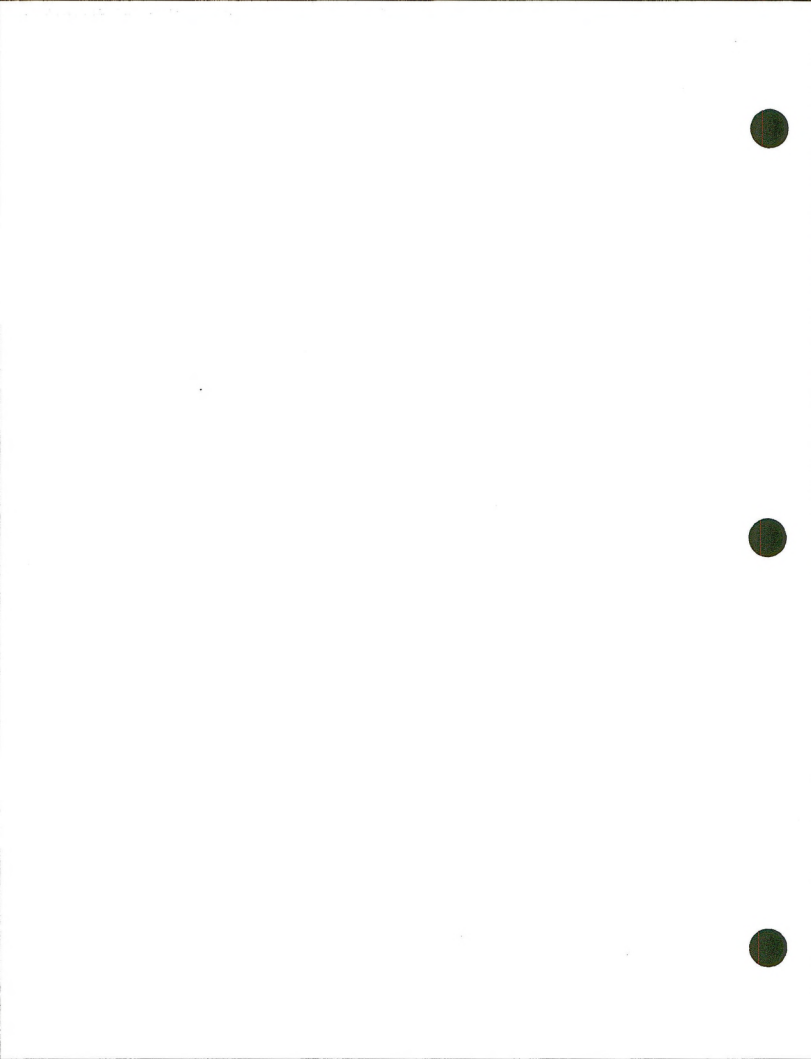
5.5.3 Summary of the Major Effects

Although the stratification system in Rangely and Río Blanco

County has not changed drastically in the last several years, it appears to be in the process of change. Agriculturalists (land owners) still maintain power at the county level. However, at the municipal level, representatives of industry (or at least individuals with industrial interests) are coming to power. This change seems to be ongoing as industry (energy development) gradually displaces agriculture as the economic base.

If the BLM land sale goes through, this should indicate an accelerated demise of the agriculturalist land owners in relation to the industrialists. Again, it is cautioned that the demise of the agricultural base may not, in the long run, be best for the community.

The effects of changes in the stratification system in terms of distribution of income, distribution of resources (such as housing), and distribution of power should be studied in the future. At this time it is difficult to say whether such changes lead to more or less equitable distribution of resources.



Chapter VI

Extra-Local Linkages (Outside Linkages)

6.1 Introduction

Energy development can effect the linkages between a rural community and the larger society by increasing the number and type of linkages, including newcomers who maintain connections outside the community and bring ideas, new practices and connections from the larger society into the community. New organizations directly or indirectly tied to energy development may also enter the local community. Such organizations may include health and protective services or retail and wholesale suppliers in the private economic sector as well as others. New voluntary associations affiliated with national and international organizations may emerge in the community as a result of new interests or increased population which can provide more support for more associations.

These expanded linkages can have positive or negative effects, and probably have some of both. On the positive side, the addition of physical resources and increases in skills and ideas can help the community adapt to new conditions and even to resolve problems which have been with the community for some time.

Some studies indicate that increased linkage can negatively affect the community by creating an unhealthy dependency on the larger society or a loss of local control over the community. Such loss of control can take many forms and has certainly occurred in many instances. Also, the local area can find itself exploited by external

groups. Large corporations have the resources to influence events at state and national levels to achieve their ends in the local community. Surplus profit from mineral development is mostly exported. In extreme cases, a community can experience a net loss in value as corporations or higher levels of government externalize their costs by passing them on to the community as they export all or almost all surplus value created by their activity.

6.2 Changes in Political Linkages

From the interviews, it is clear that political linkages in Rangely and Rio Blanco County have increased considerably since the mid 1970's, because of anticipation of oil shale development, actual increases in oil and gas activity, and the just emerging coal development.

Increases in the presence of new public offices and agencies are listed in Table 6-1. Of the six offices listed, it is highly likely that at least five of them would not have occurred without energy development and the demand it creates. The Council of Governments might have been formed because this was a national trend in the 1970's and parts of Colorado were growing from farming and sources other than energy. But it is doubtful that Rangely and the towns in northwest Colorado would have formed a COG without the expectation of energy impacts.

The changes in both formal and informal linkages are illustrated by the negotiation process which led to the \$15 million dollar impact mitigation settlement with Western Fuels (see Chapter 3). Respondents

Table 6-1

Change in the Presence of
Federal, State, Regional or County Agencies/Offices in
Rangely, 1970 - 1980

State and Federal Agencies	1970	1980	Change (Addition of/ Loss of Agencies
Mental Health Office	0	1	1
Council of Governments (COG)	0	1	1
Oil Shale Trust Fund	0	1	1
Voluntary Review Process (State of Colorado)	0	1	1
Day Care Center	0	1	1
Senior Citizens' Center	0	1	1

Source:

indicated the state of Colorado, the county, federal agencies (especially BLM), and the town of Rangely all cooperated and put up a united front to force Western Fuels to come to an acceptable settlement.

Links with the Governor's office were both formal and informal and are a good illustration. The county hired a law firm from Denver to represent them in the negotiation. The lawyer from that firm was the former head of the Department of Natural Resources in Colorado. He was also a former lawyer for the Natural Resources Defense Fund in Denver. The commissioners said he did an excellent job of representing them in the negotiation process. It appears he also advised local people on how to approach the governor and his staff for assistance, and clearly could have advised locals on how to approach the environmental group's lawyers for assistance, had they needed it.

The negotiations were carried out over several months in several locations -- Rangely, Meeker, and Denver (and possibly Washington, D.C.). These negotiations revealed the amount and type of political contacts which occurred between local politicians and state and national groups. Several respondents remarked about the number of meetings the mayor and commissioner were having in Denver and even in Washington, D.C. As spokesmen for an energy area, they clearly were being heard in places where they would normally have little or no access.

Local groups also contacted other energy growth areas -- Craig, Rock Springs, Green River -- to learn from the experiences in these towns. These exchange meetings between impact towns in the West have

become quite common. People from Gillette, Rock Springs, Craig, Rangely, Buellah, Wheatland, and Colstrip have all communicated back and forth in various combinations and with varying frequency; they call one another often and correspond in many ways. Most of this communication was not occurring prior to energy development. Development often provides local political and service agencies with the opportunity and resources to carry on such correspondence, but frequently the visits are sponsored and paid for by energy companies themselves.

In the case of Rangely, it is interesting to note the history of the relationship between Western Fuels and several impact towns and their mitigation programs. Western Fuels is an outgrowth of Basin Electric in North Dakota, which managed the Laramie River Station built in Wheatland, Wyoming. BE took Wheatland people to North Dakota to see the impact mitigation program there. The impact programs eventually established in Wheatland were more extensive than in North Dakota. Rangely people knew of the Wheatland program from Western Fuels people. The initial settlement in Rangely is more comprehensive than the initial program was in Wheatland. There has clearly been a sharing of knowledge, an evolution of the mitigation process, resulting in better social conditions accompanying development -- all of which is highly related to the type and amount of linkages between local communities, energy companies, and state and federal agencies. Basin Electric also has a reputation in both North Dakota and Wyoming as being a good company to work with.

6.3 Changes in Economic Linkages

Changes in economic linkages occur in several ways: increases in occupational mobility, increases in absentee ownership of businesses, and, increases in the number and type of businesses in the area.

Changes in business ownership and new businesses which are non-locally owned are summarized in Table 6-2. Of the nine businesses listed, four have changed from local ownership to non-local ownership and five are new non-locally owned businesses.

The effect of ownership of the six oil related service companies will probably not be significant in any way, except by their non-presence in local affairs. These are not companies which are likely to have the interest or ability to manipulate local affairs from the national or state level (loss of local control), but they are also not likely to bring new ideas or resources to the community.

The coal company, however, will probably function as Quinlan and Eberts suggest, to bring in government subsidy money. Basin Electric (Western Fuel's founder) has lobbied hard for HUD, EPA, FMHA, and HEW funds and programs in other towns where they have projects -- usually very successfully.

The presence of a large corporation also creates job mobility in several ways. Three or four local people have gone to work for Western Fuels already, moving upward in terms of income and occupational prestige. Also, the college is expanding its vocational training program, and presently has a training program for oil and gas workers. They are also expanding to a coal training program under a financial arrangement with Western Fuels. This should give local

Table 6-2

Change in the Presence of Chain Stores
of Multi-Nationals in Rangely

Name of Company	1970	1980
Colorado Well Co.	Present but Locally Owned	Krutchner (Louisiana)
7-11 Store	0	(To Be Built in 1981 or 1982)
Twin Arrow (gas company)	Present but Locally Owned	Suburban Gas (San Antonio, TX)
R&R Service (oil field service co.)	From Grand Junction	Texas International (Houston)
Northwest Pipeline	0	1
Western Slope (drilling/oil co.)	0	1
Kosekee Resources (oil/drilling co.)	0	1
Bank	Locally Owned	Purchased by Out- of-Town Group
Western Fuels (coal company)	0	1

Source:

people a chance to enter the job market in a higher and better category than they might have expected a year ago.

While it has not yet happened in Rangely, the authors have observed an increase in job mobility in other growth areas as a result of energy development. Geographically, people are moving both ways. Local people, especially the young, get new jobs created by state or federal government because of energy growth. After a year or two they're hired by an energy company because of their experience. They may then go elsewhere in the state or elsewhere with the company (Houston, Dallas, Portland, Los Angeles, etc.). And, natives of the region often return either because the company needs a "local" representative or because the person seizes the opportunity to return "home". In all cases the flow of information and ideas into the local community is increased.

To date, Rangely has experienced very little increase or change in the number and types of businesses. Because of its initial small size it will be some time before Rangely can attract nationally owned stores which might bring new services, but could also export net surplus from the local economy. The presently planned development of coal and oil shale will probably not increase Rangely's population to the level where it would attract chain stores, but growth will be large enough to expand locally owned businesses and create potential new businesses.

6.4 Changes in Social Linkages

Linkage changes caused by population growth have already been

partially discussed in the above section and in the stratification chapter.

The only real new link we perceived was the communication between new migrants and the people from their home areas. Many of the new migrants were from towns in Oregon or Michigan. Several years ago, a television show in Oregon had talked about jobs in Colorado and specifically in Rangely. Since then a number of families have migrated and are "sponsoring" other families from their home towns. This story is very similar for the people from Michigan. Because growth in Rangely has remained limited, this was the only significant new social linkage that has occurred.

6.5 Relationships of Change to Energy Development

The changes in extra-local linkages in Rangely were caused by increases in energy development in the area. With expanded industrial activity came an increase in permitting and zoning actions which demanded, to some extent, extra-local political linkages. Industrial activity expanded (exploration and production) requiring concomitant increases from industrial suppliers. In the process of expanding, several suppliers sold their companies to extra-local firms. Whether this was done because local capital for expansion was not available or because it was a good time to sell out is unknown.

This increased industrial activity also required additional manpower which led to in-migration of workers. This in-migration has led to increased social linkages outside the area.

6.5.1 Ability of the Community to Manage Growth

The changes in political extra-local linkages could be the most important change to help a community handle growth. (An interesting note here is that the linkage with the Regional Council of Governments was not viewed as helpful in the mitigative arrangements with Western Fuels.) Expertise and power at the higher levels of government could be very helpful if the higher levels of government were responsive to local needs. At least in the Western Fuels case it seems the higher levels of government were responsive.

Increases in economic linkages outside the community could decrease the ability of the community to manage growth. Although there is no evidence of this, decisions made outside of the local context may not have the community's best interest at heart. Even if the community's interests were taken into account, decisions made outside the area may be based on ill-defined definitions of the local situation.

Extra-local social linkages could increase a community's ability to manage growth by adding diversity and new ideas to the decision-making process. This is only speculation, however, and should be studied in the future.

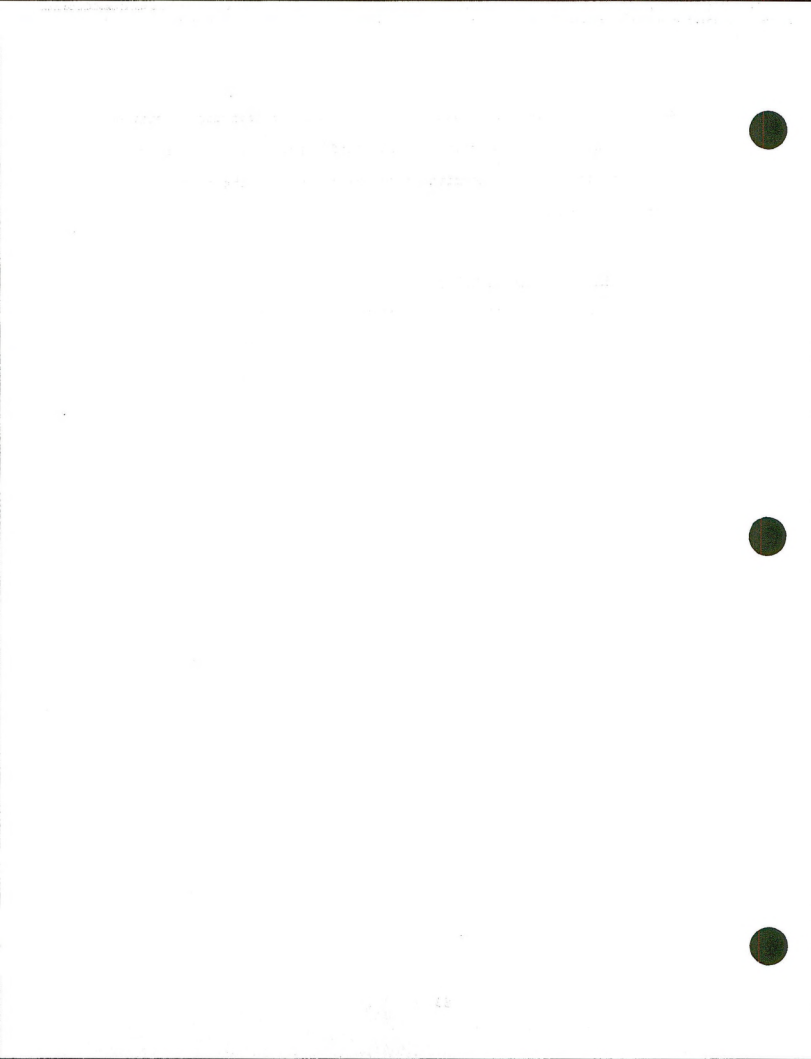
6.5.2 Distribution of Effects

The major effects of changes in extra-local linkages occur in the economic sphere. The effects in this sphere seem largely widespread. Specifically, all members of the community are likely to share in the consequences of having economic decisions that affect their well-being

made extra-locally. The loss of control over the economic destiny of the community is a cost shared by all residents. However, for residents that have no commitment to the community, the cost is of little consequence.

6.5.3 Summary of Major Effects

Undoubtedly, energy development has acted to increase extra-local linkages in Rangely. Although political and social linkages have increased, attention should be focused on the increase in extra-local economic linkages. These linkages have the potential for being most disruptive (socially and economically). Little evidence is available at present in Rangely about the consequences of such linkages.



Chapter Seven

Changes in Community Integration (Coordination/Cooperation)

7.1 Introduction

Community integration has been defined in many ways by classical and contemporary sociologists. We define it for purposes of this study as "the process by which relationships among people in a community are coordinated and interconnected". As many authors have noted, there is almost always an implicit value connotation tied to the concept of integration. We explicitly attach a value meaning to the concept as we use it here. The better integrated a community is, the greater the well-being of the majority of its members, given the resource limits of that particular community. That is, the members of a well-integrated community successfully coordinate to make beneficial use of their resources, including their skills and aspirations.

In relation to energy development in the west, there is a good deal of discussion and media attention on notions of "cohesive" communities, of towns with a "sense of community". Such towns are said to be characterized by good, well-kept public facilities, by sound public financing, by successful and well-managed retail and commercial stores, by people who have a sense of trust in and belonging to the community. People characterize towns by whether people are "cooperative and friendly", or "quarrelsome and composed of factions or cliques who do not get along".

It is this notion of an integrated community which we wish to pursue here. Energy growth and the rapid influx of new people can

affect the integration of a community in many ways. Much of the boom town literature has implied that rapid growth almost always leads to less integrated communities, to disorganization and lack of cooperation. But there is evidence that growth can push a community to greater integration. The need to solve new problems, the presence of new leaders, and an increase in resources can often improve the coordination and interconnectedness between a community's members.

Rangely appears to be a town that is relatively well-integrated at a particular level - the social, voluntary level. But there is evidence that integration at the political level is only partial and integration in the private, business sector of the community appears to be very poor.

At a voluntary, personal-social level, many people stated there was good cooperation among most individuals and groups. The empirical evidence bears this out. Elections and bond issues for public improvements pass overwhelmingly. The public buildings and facilities in the town were very good for a town of its size. Many people (permanent residents) talked and spoke of the town as a community.

Politically, there appeared to be a reasonable level of cooperation and coordination between county office holders and state officials and to some extent between county and city government. While coordination with the city administration was/is occurring between it and most other groups, there are still problems in the area. Within the town there appeared to be a lot of bickering and clearly a power struggle between supporters of the present administration and its opponents. But it appears the present town

political life is more integrative than it was under past administrations. There is evidence to suggest that political activities in the past were either stagnant or carried out for a few special interests. This is discussed further below.

A real lack of integration was apparent in the business community. Several respondents described the business community as being overly fearful of outside competition, of being uncooperative with one another to the detriment of each other and the community in general. Other respondents described in detail the effects on the business community of having limited financing available. The policies and practices of the local bank evidently have often been uneven and occasionally irrational. The most compelling evidence of a demoralized and divided business community was the condition of the retail stores and the lack of service businesses in the community.

7.2 Changes in Integration in the Economic Sphere

As discussed in the previous chapters, the land situation in Rangely appears to have hurt community growth and development in many ways. Obviously, new businesses have a hard time getting started given the prices they have to pay for new locations.

But there were many indications that members of the business community are not coordinating in their own best interests or in the interest of the community and that community members hurt the business community by doing much of their shopping elsewhere.

The usual business and service clubs which are the normal associations for local businesses appeared to be functioning poorly.

A newcomer was elected president of the Chamber of Commerce after being in town only a short while. He resigned within a year because he felt, "a few other local businessmen were trying to use the Chamber for political purposes".

The local Lions Club has been defunct until recently. It was revived by several businessmen but it already appeared to be in danger of dissolution again.

We were told numerous stories of arbitrary and irregular banking practices. Most of these problems involved the local bank president. Thus, it was hard to distinguish between structural financial effects and effects that were simply a result of this one man's personality. But it was apparent that lack of financing was a problem, that having only one bank probably creates problems for some members of a community regardless of who the personalities are. The banking problem may simply amplify a problem central to many of the business concerns we observed -- the general scarcity of economic resources. Rangely is a small town that has grown and shrunk sporadically. A lot of retail dollars are going to leave town no matter what local merchants do because people shop elsewhere for recreation and social reasons. Thus, many businesses are only marginally viable, and it is understandable that the local business owners who have survived may fear competition and are concerned about the uncertainties attached to energy development. The oil and gas business expands and contracts very quickly. Bigger projects than the Deserado Mine have stopped in mid-construction or folded after only a year or two of operation.

Thus, the business community is in a hard spot. Few of them have the financing to expand. If they do expand, they may lose what they have. If they don't expand, they may be accused of not providing the community with desired services and of contributing to creating another boom town.

7.3 Integration in the Political Arena

Cooperation and coordination in city political affairs appear to have been poor prior to the present administration, and in a state of change under the new mayor. Prior to the mid-1970's there apparently was little pressure to solve the land scarcity problem and to improve city service capabilities. The land situation appears to have been an important factor in allowing the present mayor to win office. But while a new mayor is in office, and it appears possible for a variety of people to hold city offices and appointed positions, overall cooperation among groups involved in city affairs appears to be low.

As in the business sector, leadership seems to be a significant problem. Many people acknowledged they supported the political platform of the new mayor (anti the land monopoly and related conflicts), but had doubts about the mayor's abilities. Much of the lack of cooperation was attributed to particular personality characteristics of this individual. Our perception was that lots of towns' people were trying to work together to solve city problems but were feeling blocked by the present administration. So, recent needs may have led to some change in city political affairs but it is too

early to tell whether integration in the political life of Rangely will increase.

County and state officials appeared to be cooperating rather well -- any change from the past would probably have been in the direction of greater integration at this level.

The most outstanding problem is the almost total isolation of the mobile oil and gas workers from the political life of the community. This group is not a cohesive group in itself; we refer to it as a group only very loosely, its members probably do not perceive themselves as being united or related in any meaningful way. Because these people are not organized and are so mobile, they really have no way to press demands, or even to articulate their needs to local political leaders, city or county.

7.4 Social Integration

Permanent residents appear to coordinate most of their activities at the voluntary organization, informal group level. Churches appeared to be the strongest and most successful integrative mechanisms. Schools and recreation groups also seemed to fulfill a strong organizational level. Many people indicated they liked Rangely, that there was a sense of community there for them. But, when asked for examples, they talked almost always of activities at the social level. They almost never mentioned something a business association or a city agency had done. There were numerous examples of cooperation at this social level -- the new day care center, the

softball program, church activities, the recreation complex, and others.

But as in every other sphere, there appeared to be almost total exclusion of the migrants. It simply didn't seem to occur to people that the people in the campground, and living along the river had children, families and interests that should be included in local social activities. One elderly lady, a member of an older, influential family, stated, in response to our question, that she was not afraid of the new people; she appeared quite tolerant of some minor trespassing problems -- but it simply didn't occur to her to consider what the children of these people did while their parents were off working, etc.

7.5 Relationship of Integration to Energy Development

Integration has been effected at the political, economic and social levels by energy development. At the political level the competition for control over development has occurred between the land owners and those with industrial interests. At the economic level, competition or fear of competition has kept the business community separated. At the social level, the lack of integration between the itinerant workers and the rest of the community has been caused by energy development.

7.5.1 Ability to Manage Growth

Demands created by coal development have probably increased

coordination between the state, the county, and to some extent, the city. The county's ability to manage growth appears to have increased, but it is not clear whether the county could successfully manage the magnitude of growth that occurred in Craig.

The city is having a hard time managing the small amount of growth which has happened thus far. It is too early to know which way the town will go economically and politically. Clearly coordination and cooperation in the economic and political sphere needs to improve a lot. Development of the coal mine could force improvements in these areas. But, if Rangely were confronted with really large growth as took place in Rock Springs or Gillette, Wyoming, the town would probably not respond in time and would go through a very disorganized phase.

7.5.2 Distribution of Project Effects

Effects of oil development in terms of integration have not been positive. Oil and gas development has brought some problems or exacerbated some existing problems such as the land game while not resulting in any positive changes. Oil and gas employees, both permanent and temporary, have been poorly integrated into community life.

The coal company looks like it will be a positive force for integration. Coal company employees may supply needed leadership in the political arena. Their presence should ease the economic marginality of the business community, providing more resources, making many local businesses more viable. There are many indications

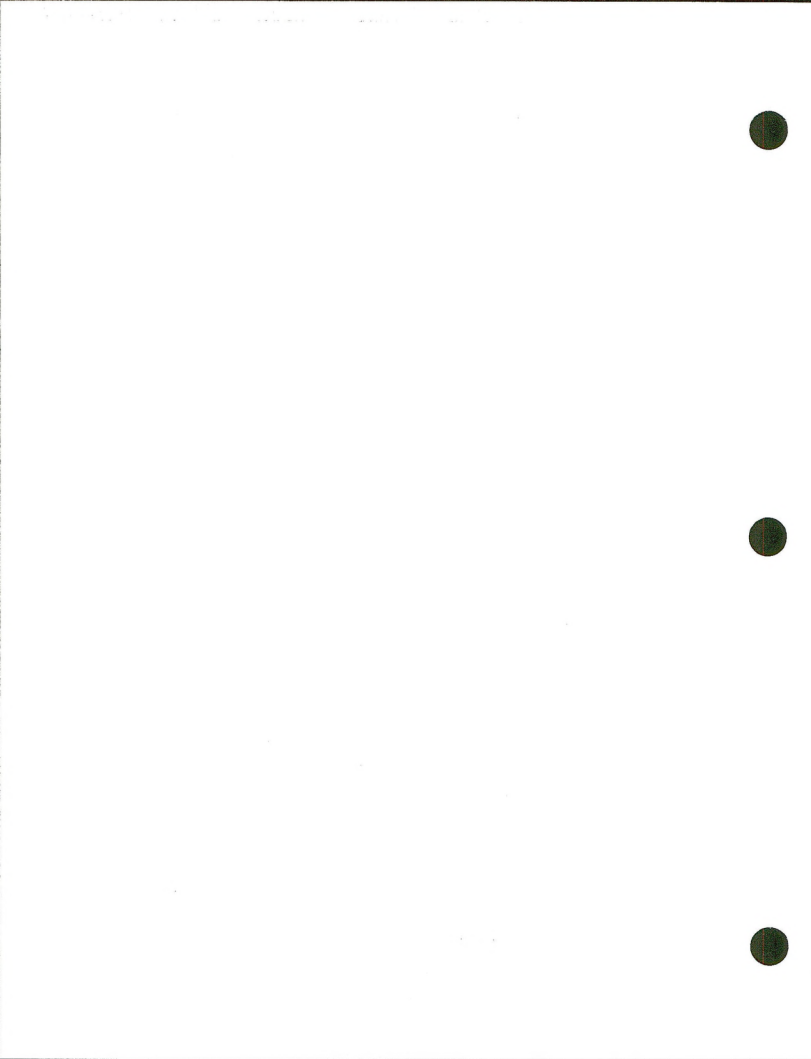
the permanent coal employees will benefit from the socially integrated elements in the community and will further increase cooperation at this level.

Most importantly, the presence of the coal mine construction work force may change the manner in which temporary workers are treated in the community. The company is legally committed to provide housing and services for its construction workers; and the mitigation settlement requires the city and county to require similar mitigation responses from other developers in the area. Thus, oil and gas companies may be forced into providing for their "indirect" employees.

7.5.3 Summary of Major Effects

Overall, integration in the community of Rangely has not changed much because significant growth is just beginning. Integration at the county level and county-state level appears to have improved just recently. But changes for most of the community are just beginning. It is too early to tell what the effects of the energy development will be.

One effect that is clear, however, is that transient oil and gas workers will continue to not be integrated with the community unless the community and the oil and gas companies make some explicit policy changes.



Chapter Eight

Indicators of Community Well-Being

8.1 Introduction

Indicators of the social well-being of Rangely and Rio Blanco County are presented in this chapter. Two sets of indicators, behavioral and material, are presented. The measures of social behavior are intended to provide indications of the social processes and dysfunctions within the community. The indicators of material well-being are included to depict the economic structure of the community and because there seems to be a relationship between social and economic well-being. The nature of that relationship will be examined more carefully in subsequent sections of this chapter.

Although the focus of this report concerns the social community which includes Rangely and surrounding areas, most of the data for the well-being indicators are reported only on a county basis. Therefore, the figures should be examined with caution.

8.2 Behavioral Indicators of Well-Being

The behavioral indicators addressed in this section of the chapter include, incidence of suicide, divorce, crime, and infant mortality for Rio Blanco County and the State of Colorado.

8.2.1 Divorce

The incidence of divorce and divorce rates for Rio Blanco County and the State of Colorado are shown in Table 8-1. The rate of divorce in Rio Blanco County has been generally increasing since 1970.

Table: 8-1

Incidence and Rate of Divorce for Rio Blanco County
and the State of Colorado, 1970 to 1980

Year	Rio Blanco County		State of Colorado	
	Incidence	Rate/1,000 Population	Incidence	Rate/1,000 Population
1970	7	1.45	10,400	4.71
1971	14	2.87	11,809	5.17
1972	19	4.04	12,604	5.35
1973	19	4.32	14,401	5.78
1974	28	6.58	15,104	5.84
1975	22	4.17	15,733	6.05
1976	28	5.32	17,520	6.67
1977	28	5.38	20,557	7.80
1978	38	7.31	18,590	6.98
1979	57	10.00	16,498	6.07
1980	39	6.24	18,571	6.43

Source: State of Colorado, Department of Health, Health Statistics
and Vital Records, 1981.

However, due to the low absolute number of divorces and small population base, the divorce rate is extremely sensitive to fluctuations. The divorce rate in Rio Blanco County was significantly lower than the rate for Colorado in every year from 1970 to 1977. Again, however, the sensitivity of the indicator to fluctuate dictates a cautious analysis.

There is an obvious trend toward increasing incidence and rate of divorce in both the county and state data. Furthermore, a more subtle trend is apparent. The rate of divorce in Rio Blanco County is generally approaching the Colorado divorce rate from 1970 to 1977.

The increased frequency of divorce in Rio Blanco County is undoubtedly linked to a number of factors. Divorce rates increased in Colorado and nationally during the 1970's largely due to its increased acceptability as a viable social mechanism. However, the divorce rate in Rio Blanco County has been increasing more rapidly than the state rate. A number of the respondents in Rangely indicated that although lucrative job opportunities made the town a good place to live, the lack of adequate housing and amenities such as shopping and social clubs made it particularly difficult for housewives to become well integrated into the community.

8.2.2 Suicide

Incidence of suicide in Rio Blanco County does not seem to be a problem of epidemic proportions as is shown in Table 8-2. The low absolute number of suicides and the small population base make it virtually impossible to draw any conclusions from the data. Given the

Table: 8-2

Incidence and Rate of Suicide for Rio Blanco County
and the State of Colorado, 1970 to 1979

Year	Rio Blanco County		State of Colorado	
	Incidence	Rate/1,000 Population	Incidence	Rate/1,000 Population
1970	1	0.21	402	0.18
1971	1	0.20	417	0.18
1972	2	0.43	453	0.19
1973	1	0.23	443	0.18
1974	0	0.00	458	0.18
1975	0	0.00	461	0.18
1976	0	0.00	460	0.18
1977	1	0.19	533	0.20
1978	0	0.00	495	0.19
1979	1	0.18	510	0.19

Source: State of Colorado, Department of Health, Health Statistics
and Vital Records, 1981.

Rio Blanco County population in any year during the period from 1970 to 1976, one suicide would create a rate which would approach or exceed the suicide rate for Colorado.

Only in one year, 1972, was more than one suicide reported and during the period from 1974 to 1976 there were none. The suicide rate for the State of Colorado suggests that the incidence of suicide in Rio Blanco County is not atypical. The state and county data suggest two conclusions. The Rio Blanco County suicide rate is relatively typical of the state as a whole and the suicide rate remained stable during the period from 1970 to 1979.

8.2.3 Crime

The incidence and rates of FBI Part I offenses for Rio Blanco County and the State of Colorado are presented in Tables 8-3 and 8-4. The incidence of homicide, rape, and robbery has been relatively low in Rio Blanco County with three or fewer offenses per year. The robbery rate has also been low when compared to that of the state. The homicide, rape, and robbery rates for both the county and the state remained relatively stable during the period from 1970 to 1980.

The greatest disparity between crime rates for Rio Blanco County and the State of Colorado appears in the assault, burglary, larceny, and motor vehicle theft categories. The rates for these offenses at the state level far exceed the county rates. The crime rates in these categories have been increasing more rapidly in Rio Blanco County than in Colorado. In fact, the rate of motor vehicle theft decreased at

Table: 8-3

Incidence and Rate of FBI Part I
Offenses for Rio Blanco County, 1970 to 1980¹

Offense		1970	1971	1972	1973	1974	1975	1976
Homicide -	Number	0	0	0	1	2	0	0
	Rate	0.00	0.00	0.00	0.23	0.47	0.00	0.00
Rape -	Number	0	0	0	1	2	0	0
	Rate	0.00	0.00	0.00	0.23	0.47	0.00	0.00
Robbery -	Number	1	0	0	0	0	0	1
	Rate	0.21	0.00	0.00	0.00	0.00	0.00	0.19
Aggravated Assault -	Number	2	1	10	6	11	5	17
	Rate	0.41	0.20	2.13	1.36	2.58	0.95	3.23
Burglary -	Number	14	16	20	7	21	17	26
	Rate	2.89	3.28	4.26	1.59	4.93	3.23	4.94
Larceny -	Number	36	41	41	55	75	45	89
	Rate	7.45	8.39	8.72	12.49	17.62	8.54	16.91
Motor Vehicle								
Theft -	Number	1	2	4	1	6	2	6
	Rate	0.21	0.41	0.85	0.23	1.41	0.38	1.14
Total Part I								
Offenses -	Number	54	60	75	71	117	69	139
	Rate	11.15	12.29	15.96	16.13	27.49	13.09	26.42

¹ Rates are calculated as number of offenses per 1,000 population.

Source: Wyoming Research Corporation, United States Geological Survey
Data File, 1981 and Colorado Bureau of Investigation, 1981.

Table: 8-3

Incidence and Rate of FBI Part I
Offenses for Rio Blanco County, 1970 to 1980¹

Offense		1977	1978	1979	1980
Homicide -	Number	0	0	0	1
	Rate	0.00	0.00	0.00	0.16
Rape -	Number	3	0	0	3
	Rate	0.58	0.00	0.00	0.48
Robbery -	Number	1	0	1	1
	Rate	0.19	0.00	0.18	0.16
Aggravated Assault -	Number	20	20	13	11
	Rate	3.85	3.85	2.28	1.76
Burglary -	Number	24	50	58	55
	Rate	4.62	9.62	10.18	8.79
Larceny -	Number	91	125	155	235
	Rate	17.50	24.04	27.19	37.57
Motor Vehicle					
Theft -	Number	6	6	17	16
	Rate	1.15	1.15	2.98	2.56
Total Part I					
Offenses -	Number	145	201	244	322
	Rate	27.88	38.65	42.81	51.48

¹ Rates are calculated as number of offenses per 1,000 population.

Source: Wyoming Research Corporation, United States Geological Survey
Data File, 1981 and Colorado Bureau of Investigation, 1981.

Table: 8-4

Incidence and Rate of FBI Part I
Offenses for the State of Colorado, 1970 to 1980¹

Offense		1970	1971	1972	1973	1974	1975	1976
Homicide -	Number	221	236	298	248	213	283	241
	Rate	0.10	0.10	0.13	0.10	0.08	0.11	0.09
Rape -	Number	806	865	893	956	945	1,057	941
	Rate	0.37	0.38	0.38	0.38	0.37	0.41	0.39
Robbery -	Number	2,962	3,073	3,277	3,957	4,140	4,409	3,651
	Rate	1.34	1.35	1.39	1.59	1.60	1.70	1.39
Aggravated Assault -	Number	4,685	4,904	5,305	5,427	12,369	13,061	13,770
	Rate	2.12	2.15	2.25	2.18	4.79	5.02	5.21
Burglary -	Number	25,071	27,948	31,393	32,446	34,835	37,975	34,341
	Rate	11.36	12.24	13.32	13.03	13.48	14.60	14.21
Larceny -	Number	69,036	73,408	71,140	71,712	83,902	94,113	104,290
	Rate	31.28	32.15	30.17	28.80	32.47	36.18	39.63
Motor Vehicle								
Theft -	Number	12,974	12,851	13,740	13,797	13,445	11,723	11,422
	Rate	5.88	5.63	5.83	5.54	5.20	4.51	4.35
Total Part I Offenses -	Number	115,755	123,285	126,046	128,543	149,849	162,621	171,682
	Rate	52.44	53.99	53.46	51.62	57.98	62.52	65.32

¹ Rates are calculated as number of offenses per 1,000 population.

Source: Wyoming Research Corporation, United States Geological Survey
Data File, 1981 and Colorado Bureau of Investigation, 1981.

Table: 8-4

Incidence and Rate of FBI Part I
Offenses for the State of Colorado, 1970 to 1980¹

Offense		1977	1978	1979	1980
Homicide -	Number	166	196	161	197
	Rate	0.06	0.07	0.06	0.07
Rape -	Number	1,100	1,323	1,472	1,563
	Rate	0.42	0.50	0.54	0.54
Robbery -	Number	4,471	4,251	4,353	4,659
	Rate	1.70	1.60	1.60	1.61
Aggravated Assault -	Number	7,670	7,526	8,486	10,658
	Rate	2.91	2.83	3.12	3.69
Burglary -	Number	50,684	49,917	49,741	61,333
	Rate	19.23	18.74	18.31	21.23
Larceny -	Number	102,225	106,185	117,898	133,800
	Rate	38.78	39.86	43.41	46.32
Motor Vehicle Theft -	Number	12,496	13,028	13,345	13,844
	Rate	4.74	4.89	4.91	4.79
Total Part I Offenses -	Number	178,812	182,426	195,456	226,054
	Rate	67.83	68.48	71.96	78.25

¹Rates are calculated as number of offenses per 1,000 population.

Source: Wyoming Research Corporation, United States Geological Survey
Data File, 1981 and Colorado Bureau of Investigation, 1981.

the state level from 1972 to 1976 but has continued to increase in Rio Blanco County.

For both Rio Blanco County and the state, the three categories of violent crimes against persons (homicide, rape, and robbery) have maintained relatively low and stable rates. The major contributors to the increase in the Total Part I offense rate have been crimes against property (burglary, larceny, and motor vehicle theft). This indicates that the crime wave suggested in much of the literature is probably not directly related to the personal security of individuals and their families.

8.2.4 Infant Mortality

The incidence and rate of infant mortality in Rio Blanco County and the State of Colorado are shown in Table 8-5. The infant mortality figures include deaths of all children under 28 days old. The mortality rate is based upon the number of births reported.

As the data indicate, the incidence of infant mortality in Rio Blanco County is very low. Two or fewer infant deaths were reported each year from 1970 through 1980. The number of births is also low. Therefore, the infant mortality rate is highly susceptible to fluctuation. In any year when one or more infant deaths were recorded in Rio Blanco County, the infant mortality rate exceeded the rate for the State of Colorado.

In general, however, the infant mortality rates for both the state and the county seem to be decreasing. The number of births in Rio Blanco County increased 71 percent from 1970 to 1980 while the

Table: 8-5

Incidence and Rate of Infant Mortality
for Rio Blanco County and the State of Colorado, 1970 to 1980¹

Year	Rio Blanco County		State of Colorado	
	Incidence	Rate/1,000 Births	Incidence	Rate/1,000 Births
1970	2	24.10	628	15.14
1971	2	23.26	541	13.40
1972	1	13.51	487	12.62
1973	0	0.00	465	12.08
1974	1	13.89	447	11.45
1975	1	11.11	383	9.54
1976	0	0.00	357	8.71
1977	1	8.26	318	7.39
1978	1	8.70	303	6.88
1979	0	0.00	300	6.36
1980	0	0.00	329	6.62

¹ Infant mortality figures includes all deaths of infants under 28 days old.

Source: State of Colorado, Department of Health, Health Statistics and Vital Records, 1981.

number of infant deaths slowly declined. The number of births reported throughout the State of Colorado increased only 20 percent from 1970 to 1980 but the number of infant deaths decreased 48 percent.

8.3 Material Indicators of Well-Being

The material indicators of well-being included in this section of the chapter are per capita income, per worker income, poverty status of persons and families, labor force participation, and unemployment. A discussion of these indicators for both Rio Blanco County and the State of Colorado is presented. In addition, the change in the distribution of businesses by industry in Rio Blanco County is discussed.

8.3.1 Per Capita and Per Worker Income

Both per capita and per worker income increased dramatically in Rio Blanco County and the State of Colorado from 1970 to 1978. As shown in Table 8-6, per capita income in the county has increased 160 percent since 1970. Per worker income increased 70 percent during the period from 1970 to 1977. For the state as a whole per capita income increased 110 percent and per worker income rose 67 percent during the same periods.

Although the level of per capita income in Rio Blanco County was below that of the state in almost every year from 1970 through 1977, the level surpassed that of the state in 1978.

Table: 8-6

Per Capita and Per Worker Income for Rio Blanco County
and the State of Colorado, 1970 to 1978

Year	Rio Blanco County		State of Colorado	
	Per Capita Income	Per Worker Income	Per Capita Income	Per Worker Income
1970	\$ 3,470	\$ 7,073	\$ 3,855	\$ 8,880
1971	4,410	8,938	4,168	9,518
1972	3,865	8,980	4,537	10,128
1973	4,678	10,729	5,042	10,926
1974	4,495	10,211	5,453	11,801
1975	5,427	10,394	5,929	12,866
1976	5,140	11,233	6,439	13,713
1977	6,379	12,049	7,199	14,863
1978	9,021	NA ¹	8,114	NA

¹ Not Available

Source: Wyoming Research Corporation, United States Geological Survey
Data File, 1981.

However, per worker income is probably a better indicator of economic well-being. The per worker income level in Rio Blanco County has been below the state figure every year during the period from 1970 to 1977. The average per worker income in the county was only 80 percent of the Colorado average in 1970. By 1973, the county average was 98 percent of the state average but declined to 81 percent again by 1977. Therefore, although both per capita and per worker income levels in Rio Blanco County have shown steady growth since 1970, a comparison of the average per worker income for the county and the state shows no relative change.

8.3.2 Poverty Status

The data in Table 8-7 show the poverty status of persons and families in Rio Blanco County and the State of Colorado for the years 1960 and 1970. It is interesting to note that there was a decrease in the absolute numbers of persons and families below the poverty level for both the county and the state. However, there was a significant decrease in the percentage for the state while the proportion of persons below the poverty level in Rio Blanco County increased and the percentage of families decreased only slightly.

In 1960, both the proportions of persons and families below the poverty level in Rio Blanco County were lower than those for the state as a whole. By 1970 that situation was reversed. However, the differences between the state and county percentages were much smaller in 1970.

Table 8-7

Poverty Status of Persons and Families in Rio Blanco County
and the State of Colorado, 1960 and 1970

	1960		1970	
	Number	Percent	Number	Percent
Rio Blanco County:				
Persons Below Poverty Level	640	12.3%	604	12.8%
Families Below Poverty Level	157	11.4%	130	10.1%
State of Colorado:				
Persons Below Poverty Level	312,413	18.3%	263,224	12.3%
Families Below Poverty Level	63,802	14.5%	49,850	9.1%

Source: U.S. Department of Commerce Bureau of the Census, Census of Population: Characteristics of the Population, Colorado.

8.3.3 Labor Force Participation and Unemployment

As is indicated in Table 8-8, female participation in the labor force has been steadily increasing in both Rio Blanco County and the State of Colorado since 1950. Although the preparation of female members in the labor force has always been lower in the county than in the state as a whole, the size of the difference has been decreasing. The state and county pattern of increasing female participation in the labor force parallels the national trend since the 1950's.

The rate of unemployment in Colorado and Rio Blanco County has been decreasing since 1950. This must be viewed as an indication of increased economic well-being. Also, the unemployment rate in the county generally has been close to the state rate but slightly lower.

8.3.4 Distribution of Businesses by Industry

The change in the distribution of businesses by industry in Rio Blanco County is shown in Table 8-9. There was a 35 percent increase in the total number of businesses in Rio Blanco County during the period from 1970 to 1979. According to the data, almost a third of that increase can be attributed to the establishment of new retail businesses. This is exactly the opposite of the comments made by local residents during the field work. They generally maintained that no new retail stores had recently opened in Rangely. Therefore, most of the new retail trade establishments must be located in Meeker.

The other industry which has grown significantly since 1970 is contract construction. Coupled with retail trade, these two categories account for almost 60 percent of the growth since 1970.

Table 8-8

Labor Force Participation and Unemployment for Rio Blanco County
and the State of Colorado, 1950, 1960, and 1970¹

	1950		1960		1970	
	Number	Percent	Number	Percent	Number	Percent
Rio Blanco County:						
Male	1,506	82%	1,519	72%	1,334	67%
Female	324	18%	579	28%	654	33%
Total Labor Force	1,813	100%	2,098	100%	1,988	100%
Unemployment	76	4.2%	85	4.1%	42	2.1%
State of Colorado:						
Male	345,896	73%	467,755	69%	578,719	64%
Female	130,748	27%	212,997	31%	331,934	36%
Total Labor Force	476,644	100%	680,752	100%	910,653	100%
Unemployment	21,604	4.5%	26,036	3.8%	20,994	2.3%

¹ The figures for 1950 and 1960 include individuals 14 years of age or older. The 1970 figures include individuals 16 years of age or older.

Source: U.S. Department of Commerce Bureau of the Census, Census of the Population: Characteristics of the Population, Colorado.

Table 8-9
Distribution of Businesses by Industry for Rio Blanco County, 1970 and 1974 to 1979

Type of Business	1970		1974		1975		1976		1977		1978		1979	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agricultural Services	1	0.7%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	1	0.5%
Mining	28	20.3	47	26.6	48	26.4	45	25.0	20	12.3	23	13.5	33	17.7
Contract Construction	12	8.7	20	11.3	17	9.3	19	10.6	22	13.5	30	17.6	26	14.0
Manufacturing	4	2.9	8	4.5	9	4.9	7	3.9	6	3.7	5	2.9	6	3.2
Transportation Public - Utilities	9	6.5	9	5.1	9	4.9	11	6.1	10	6.1	9	5.3	10	5.4
Wholesale Trade	5	3.6	8	4.5	8	4.4	8	4.4	10	6.1	9	5.3	6	3.2
Retail Trade	37	26.8	46	26.0	44	24.2	43	23.9	42	25.8	47	27.6	51	27.4
Finance, Insurance Real Estate	8	5.8	6	3.4	7	3.8	9	5.0	12	7.4	11	6.5	15	8.1
Services	33	23.9	28	15.8	31	17.0	34	18.9	38	23.3	31	18.2	28	15.1
Non Classified	1	0.7	5	2.8	9	4.9	4	2.2	3	1.8	5	2.9	10	5.4
Total # Business	138		177		182		180		163		170		186	
% Change from Previous Year			NA		2.8%		-1.1%		-9.4%		4.3%		9.4%	

Source: U.S. Department of Commerce, Bureau of the Census, County Business Patterns, Colorado.

The only industrial category which experienced an absolute decline was the service sector. The number of service related businesses decreased from 33 in 1970 to 28 in 1979. The number of agricultural service establishments dropped from one to zero between 1970 and 1974 and the one appeared again in 1979.

A number of the industrial sectors, including mining, transportation, public utilities, and wholesale trade, grew in absolute numbers from 1970 to 1979, but the growth was so slight that each sector decreased as a percentage of the total.

The figures in Table 8-9 suggest that the period from 1970 to 1975 was one of economic growth in Rio Blanco County. The local economy declined during 1976 and 1977 and is only now approaching the level experienced in 1975.

8.4 Summary

All of the county level data presented in this chapter must be analyzed cautiously. Because of the relatively low incidence of suicide, divorce, infant mortality, etc. and the small population base utilized to compute rates, the rates are very susceptible to change.

Nonetheless, the comparison of Colorado and Rio Blanco County which was presented suggests that the county is relatively typical of the state as a whole. There are two apparent differences indicated. First, the crime rate in Rio Blanco County is significantly lower than that of Colorado. This is primarily the result of experiencing lower rates of crimes against property. Second, there is a consistent discrepancy in the average per worker income of the state and county.

The average per worker income in Rio Blanco County is consistently ten to twenty percent below the state average.

Chapter IX

Summary

Since the mid-1970's, Rangely has been experiencing steady growth as a result of increased drilling activity in Rio Blanco County. This period of growth is expected to continue into the 1980's with the planned construction of the Deserado Mine, a coal mine, the Moon Lake Power Plant Project, a coal-fired power plant, and a pipeline from the mine to the power plant. The coal mine is located just north of Rangely and the power plant is being built nearby in Bonanza, Utah.

There have been many companies in various capacities involved in developing the oil shale tracts and in drilling for gas and oil in the Rangely area. There have been virtually no mitigation activities by these companies. However, a mitigation settlement was negotiated with Western Fuels, the company that will construct and operate the Deserado Mine. The mitigation package totals almost \$15 million and will undoubtedly enhance the ability of Rangely and Rio Blanco County to respond to the needs of a growing population. The additional monies available from the Colorado Oil Shale Trust Fund will also help to alleviate the financial burdens brought on the community by energy development.

The most controversial issue in Rangely has centered around land control. All of the land surrounding Rangely is BLM land or is owned by agriculturalists who have generally been unwilling to sell any land except at greatly inflated prices. The unavailability of affordable land caused a severe housing shortage and stifled economic growth. In

response to these problems, the town negotiated a land sale from the BLM, effectively breaking the stalemate with the landowners. As the land acquired from the BLM is developed, the housing situation is expected to improve.

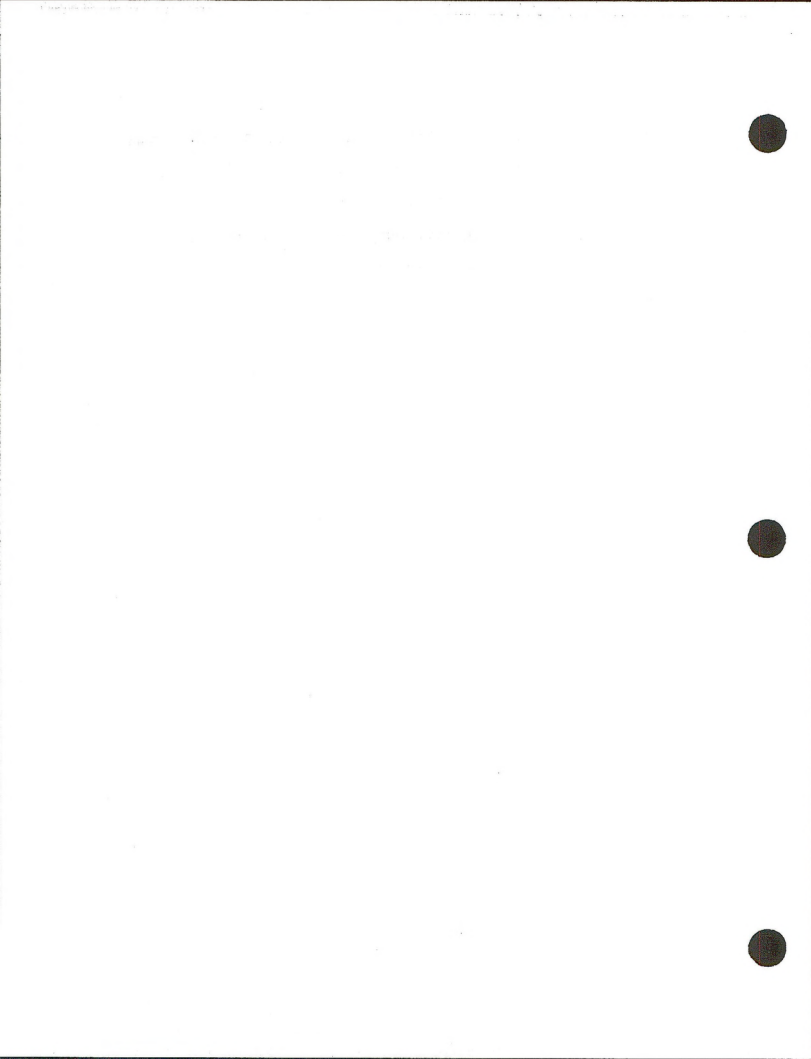
Even though Rangely has not experienced the magnitude of growth which was originally anticipated, many changes have taken place in the political structure and the composition of city and county governments. A Special Impact Task Force was created, along with two advisory committees. A new position was created in the county planner's office, the town hired a full-time administrator, and there are plans to hire a financial manager and a housing specialist. Also, the western half of the county formed a special recreation district and a new taxing district. Officials have become increasingly more professional, particularly at the municipal level. Political linkage between officials at the city, county, state and federal levels have increased considerably since the mid-1970's. The communication between officials was instrumental in the successful negotiation of the mitigation settlement with Western Fuels.

Rangely has experienced very little change in the service sector, mainly because of the unavailability of land for development. With the land purchased from the BLM, the town will eventually be able to diversify its economy to provide the goods and services being demanded by the growing population. Economic growth has also been suppressed by the high degree of uncertainty connected with energy development as well as the general economic climate of the nation.

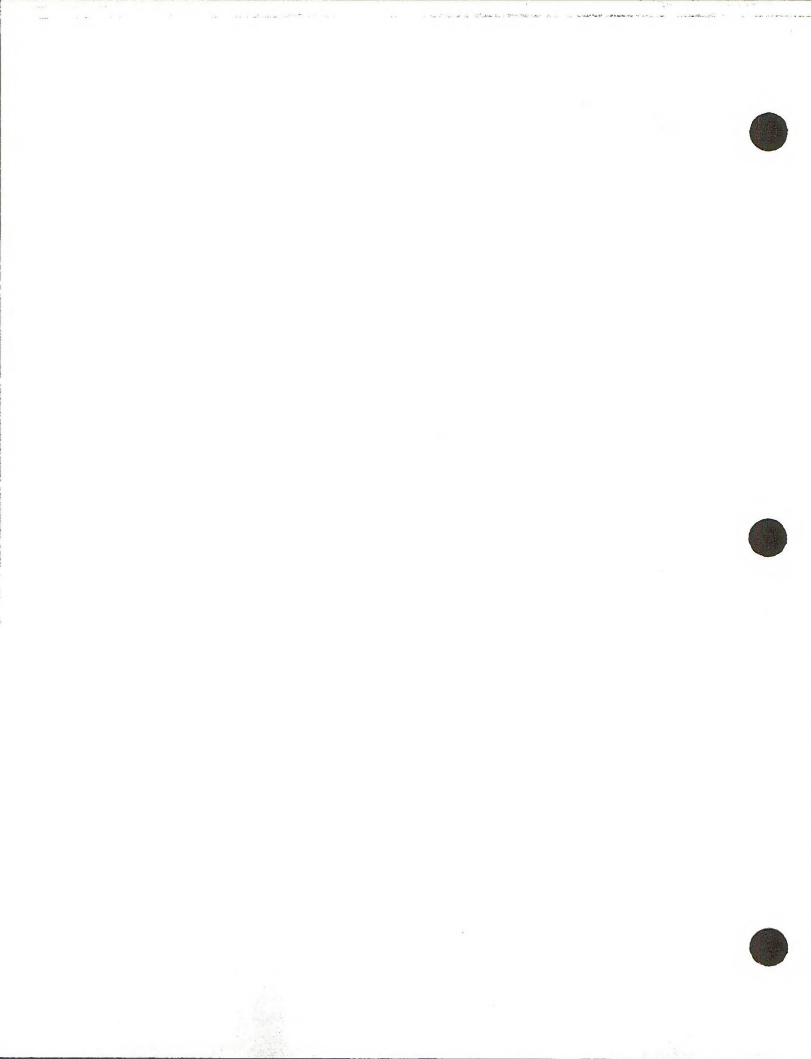
The coal mine, because it has a local market, should contribute enormously to the economic stability of Rangely and Rio Blanco County.

A major negative aspect of the growth has been the conflict between the itinerant workers and the permanent residents. Because the community and companies have been unable and/or unwilling to provide the housing and basic services these workers need, the result has been a very frustrated and disillusioned itinerant population. The anger of these workers and their families is often evident in their behavior, a fact which only compounds the problem and makes the integration of these workers into the community even more difficult.

Rangely has experienced steady growth for the last seven or eight years, but the peak impact period is probably still to come. Changes in the political structure and its recent experiences with energy development have made Rangely better prepared to deal with the problems associated with rapid growth. As more development takes place, the town will undoubtedly undergo many changes in the political, economic and social arenas. Even with the ever-present cloud of uncertainty surrounding energy development, the economic base of Rangely is likely to continue to shift toward development of the existing energy-related resources.



APPENDIX A



APPENDIX A
Example Interview Guide

A.1 Agency Interviews

- A.1.1 Interviews with Service Agencies
(school, social services-welfare, law enforcement, public health, mental health, judge if possible)

A.1.1.1 Schools

- 1) Introduce yourself and explain purpose -- want to know how community addressed each of the needs that occurred during period of rapid growth (or last five years).
- 2) Review population data and causes of growth.
- 3) Review school data (have copy ready for them)
Make any corrections/additions or comments. If data not available locally, find out where it would be.
- 4) How has demand changed? Why? (esp. energy growth)
- 5) Has classroom space been adequate and available when needed to meet demand? If not, when was problem period? Why was there the problem? How was it resolved?
- 6) What important changes have occurred in the area of . . .?
Was that a problem? How were problems addressed? What are concerns for future?
 - curriculum/education approach
 - student behavior and characteristics - probe esp. for transiency (check availability of turnover rates)
 - administrative procedures
 - any special programs for newcomers
 - any special problems created by newcomers
 - any changes due to growth
 - financing
- 7) What school-related changes or issues have there been that drew public interest or participation? (e.g., consolidation, new school construction, etc.) Point is to articulate public decision-making process. What are concerns?
 - Who, when, what, how, why. Who were the parties involved?
 - Who was not involved who logically should have been?
 - If there were factions, identify issue and probe for recurrence and for names of prime actors on both sides.
 - Was there a point when problems started being addressed in a new way? When? Why?
- 8) At the beginning of the growth period (or 10 years ago), who were the influentials in the community?

- How has that changed? What was energy development's role? Who were key decision-makers for community during growth period?
- 9) Check for changes in extra-local linkages (source of funds, contacts, source of teachers in-service, etc.)
- 10) In their opinion, were there groups in the community that have been (or would be) affected differently by the growth and energy development?
 - Both positive and negative
 - Who, how and why (seek mechanism and understanding of change and community structure that distributes effects/opportunities) (prompt for employment, housing, services, schools, way-of-life)
- 11) Functional groups and social differentiation:
 - try to get a description of criteria for social differentiation (in pre-growth period if there was one) and of each of the major groups (size, livelihood, geographic location, ethnicity, property ownerships, relationships between groups) How has that changed? (Criteria, groups or group characteristics). The purpose is twofold: (1) to describe structural/organization characteristics of community and (2) to identify attributes of groups that could influence distribution of project effects. Get names of group representatives. (Important for interviewing but also to illustrate familiarity with different strata.)
- 12) Demographic characteristics of respondent
 - position and history of employment
 - length of residence in community
 - where from
 - family characteristics
 - age
 - sex
 - relationship to energy development

A.1.1.2 Law Enforcement

- 1) Introduction
- 2) Review growth data
- 3) Review Part 1 and Part 2 crime and service provision
 - reported crime
 - calls for service
 - budget
 - uniformed officers and personnel
 - cars
- 4) Did crime and/or calls for service increase during growth period? What are expectations?
 - what types of crime(s)
 - who were (will be) perpetrators?
 - who were (will be) victims? Did (will) crime occur in particular neighborhoods/areas?

- what do they think was (or will be) reason for change?
- (Sheriff, what about specific county problems -- trespass, poaching, cattle rustling, etc. what is county people's view?)
- 5) Service provision
 - Were (will personnel and equipment (be) adequate? If not, when was it inadequate? Why was it inadequate?
 - What important changes have occurred (or are anticipated) in their department?
 - staff
 - administrative procedures
 - manner of enforcement
 - source of financing
- 6) What law enforcement changes (or issues) have there been that drew public interest or participation? (e.g., new jail, consolidation of enforcement) Object is to articulate public decision-making, and to discuss sequence of response by community and leaders re: energy-related demands)
- 7) At beginning of growth period, who were the influentials? How (and when) did that change? What was role of energy development?
- 8) Check for changes in extra-local linkage.
- 9) Ask about groups and distribution of growth effects to different groups. Check especially for relationships among groups. Ask if they know representatives from each group that could be interviewed.
- 10) If appropriate, ask personal interview questions:
 - position and history of employment
 - length of residence in community
 - where from
 - family characteristics
 - age
 - sex
 - relationships to energy development

A.1.1.3 Social Service/Public Assistance and Mental Health

- 1) Introduction
- 2) Review growth patterns and causes
- 3) Review agency data structure of agency
 - by type of assistance: total annual expenditures; expenditures per 1,000 population; caseloads; staff levels
- 4) How has demand for service changed? Why? Change in use patterns by long-time residents? Why? Different use patterns by newcomers? Why? How are these reflected in the data?
- 5) Have staff and resources been adequate and available when needed to meet demand? If not, when was problem period? Why was there the problem? How was it

- resolved? Have they received adequate support from state?
- 6) What important changes have occurred (or are anticipated) in the areas of . . . What is their view on source of change? Any data?
 - child abuse and neglect
 - marital discord, spouse abuse, divorce
 - alcoholism
 - 7) What public service/assistance-related changes or issues have there been that drew public interest or participation? Describe outcome, how does that fit into overall decision-making pattern in community? Was there a point (in growth period) when decisions started being made in a new way or by different people?
 - 8) Who were influentials at beginning of growth period? How has that changed? What was energy development's role? Get names of really key individuals re: community actions.
 - 9) What distinguishable groups are there in the community? What are criteria for social differentiation? What are distinctive attributes of each group? How would one characterize relationships between groups? What about prior to growth? (Any particular neighborhoods?) Names of people who could discuss each group.
 - 10) Have groups been affected differently by growth? Especially energy development? What about inflation? How have effects of energy development been distributed among groups? How has that occurred?
 - 11) Demographic characteristics of respondent
 - position and history of employment
 - length of residence in community
 - where from
 - family characteristics
 - age
 - sex
 - relationship to energy development

A.1.2 Group Representatives/General Population

A.1.2.1 Introduction

A.1.2.2 Personal Biography

- 1) Background (family, where lived)
- 2) When came to community
- 3) Educational history
- 4) Occupational history, esp. during 1970's
 - occupational mobility/immobility
 - energy-related employment - how did (would) they get it? entrepreneurial - ask about financing, business style and expansions
- 5) Housing - price or availability

- 6) Family history - school and employment history of spouse; school experience of children
- 7) Service provision - any problems? evaluation -- compare predevelopment with now.
- 8) What recreational/social activities available and used; compare predevelopment (or future) with now.
- 9) Who are their friends, occupation - length of residence, location - how did they become friends? Change during study period?
- 9a) Who are their children's friends?
- 10) How were friends affected by development?
- 11) How about others in the community? What other groups do they see? Were any affected differently? How?
- 12) Have newcomers been accepted as part of the community? Examples of interaction between long-time residents and newcomers; between various groups.
- 13) How do they feel they personally have been affected (or anticipate)?
- 14) How do they feel their neighborhood has been affected (or anticipate)?
- 15) If parents are in community, how have they been affected (or anticipate)?
- 16) What changes have occurred in the community (or anticipate)? What effects have there been from energy development (or anticipate)?
 - change in decision-making
 - change in orientation/focus
 - sense of vitality
 - sense of community purpose
- 17) General satisfaction with expected changes
- 18) If good spokesperson for their group
 - profile of group predevelopment
 - livelihood
 - size
 - location (residential)
 - property ownership
 - demographic characteristics
 - special needs
 - intergroup relationships
 - position in community and relationship with other groups
 - distribution of effects
 - employment and income
 - size
 - demographic characteristics
 - housing
 - facilities/services
 - decision-making
 - relationship with others
 - profile now

A.1.3 Decision-Maker Interviews

The purpose of these interviews is to describe the evolution of community-level response to the demands of growth. In addition to this description, the purpose is to be able to determine how pre-growth community and decision-making characteristics influenced (or will influence) the response pattern and how the modification of the decision-making process has affected (will affect) community-level decision-making both during and after rapid growth. Of particular interest is the role and utilization of legislation, especially legislation developed for impact mitigation.

1. Introduction
2. Review chronology and source of growth (complete Figure 3)
3. Rapid growth creates some major needs and changes in a community. Discuss how the community addressed some of the major ones. Ask about ones already identified, but pursue others they identify.
 - 1) Schools
 - Building new facilities -- how did votes come out on major bond issues? Why? Were they able to raise adequate funds? What were problems? Why did they occur? How were they addressed? Who? Were they solved? Will they occur again next time? What role did state actions/legislation play in response?
 - How did response evolve over study period? How did the changes affect how things are done now? Was there a point when decisions or community response was approached in a new or different way?
 - 2) Housing
 - How did housing response occur? How was it coordinated? What were the problems? (probe financing and zoning and legislation) Why did they occur? How were they addressed? Who? Were they solved? Will they recur next time? Role of state actions-legislation
 - How did response evolve over study period? How do the changes that occurred affect how things are done now?
 - 3) Planning and zoning
 - How and when did formal planning and zoning get started and staffed?
 - What role did it play throughout the study period?
 - What were problems? or key decisions?
 - How did they occur?
 - How were they addressed - by whom?
 - Were they solved or will they recur?
 - What role did legislative actions play?
 - How did response evolve over time? What use was made of legislation? Where did initiative come from? Was there resistance?
 - 4) Public works - discuss major decisions as above
 - 5) Law enforcement - as schools

- 6) Animal control - What have they done? How and why? How successful?
- 7) Review how and when state acts designed to assist with the impacts of energy growth have been used. How important have they been? (e.g., for Wyoming: (1) sales tax (2) farm loan board (3) joint power acts (4) industrial siting (5) severance tax)
- 8) In respondent's opinion, how much local control has (will) the community been (be) able to exercise over the important decisions and actions that affected it during growth period?
 - was prewarning adequate and accurate (information)?
 - cooperation from project sponsor? Describe how and why
 - was uncertainty about reality of development a problem? How, why?
 - been able to work with state in handling problems?
- 9) Clarify their perception of the role and importance of state involvement and of large non-local corporate involvement in the community economy/affairs who initiated? What effect now? Future?
- 10) How has (will) the political leadership and government structure in the community changed? regarding city council, county commission, county chairman of political parties?
 - Have there been any changes as a direct result of energy development?
 - Any that are particularly important to community's response or ability to respond?
 - Have companies participated? How?
 - Have (will) community leaders been (be) willing to address problems and take action? Why not, what was (will be) impediment?
 - Has (will) conflict of interest been (be) important in shaping community response, either in terms of actions taken or public trust/community support?
- 11) If business person or banker:
 - Was there (is there anticipation of) a shortage of financing for either businesses or consumers during the study period? Why? How was (will) it (be) addressed? What effect did (will) it have? Where do locals bank?
 - Has banking structure in the community changed? In what way? Why?
 - Did banking policies and practices change during the study period?
 - What role, if any, did energy companies play in banking, local (vs. non-local) businesses?
- 12) Demographic characteristics
 - occupation and previous employment history
 - length of residence in community
 - origin

-- family characteristics (including other relatives)

-- age

-- sex

-- relationship to energy development

13) Check to see if they feel any pertinent information has been neglected

14) Names of other people to talk to

-- influentials

-- group representatives (if any)

-- administrative leaders